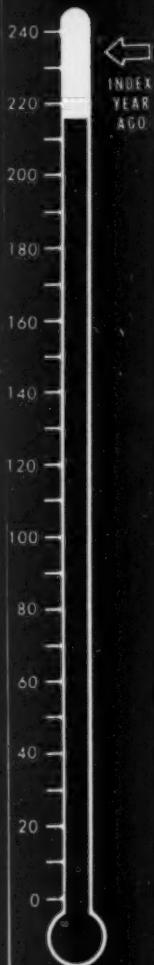


# BUSINESS WEEK

Retail Sales

PICK UP AT LAST  
PAGE 27



Richard S. Boutelle: Boxcars in the air put Fairchild in the chips (page 92)

A MCGRAW-HILL PUBLICATION

JULY 19, 1952

TWENTY-FIVE CENTS

# IMPROVED BEARING DESIGN

**means longer tractor life!**



Farmers today know their equipment. They are quick to notice, for example, that tractors and implements equipped with Bower Spher-O-Honed bearings operate efficiently year in and year out with little or no bearing maintenance, almost never break down due to bearing failure. Each of these important end-product advantages can be traced directly to specific Bower engineering advances such as the spherical contour of the roll-heads and flange surfaces, the generous oil groove and smooth, precisely finished races. Put this extra value to work for you; specify Bower Spher-O-Honed bearings for your product!

BOWER ROLLER BEARING COMPANY  
Detroit 14, Michigan

# BOWER

ROLLER BEARINGS





*"Vision is Indispensable to Progress"*

## "Roll your own Rainbows!" —the story of America's most colorful industry

No oriental potentate ever had the choice of colorful interiors you can have in your home today. By intermixing standard colors of paint in recommended proportions, a dealer can now give you and your contractor an almost limitless range of tones and tints.

Great strides, too, have been made in application methods. In addition to the time-honored paint brush, made with hog or synthetic bristles, new "roller coaters" easily achieve attractively textured finishes. New spray devices create intriguing patterns, heretofore difficult or impossible to attain.

During the past ten years paint manufacturers have brought an ever-widening color consciousness to Mr. and Mrs. America. With paints that consistently retain a fresh, new look, they have made it possible for every-

one to satisfy the desire for more and better color, easily and economically.

Many of these 1400 manufacturers furnish dealer, contractor and consumer with comprehensive color guides. Ranging from the familiar color chip chart to expensive, beautifully printed portfolios, this explanatory material promotes the use of tastefully selected, authentically styled color schemes.

Among increasingly useful paints are odorless, self-cleaning and rust-inhibitive types—those with a quick-drying rubber base which leave no brush marks and can be scrubbed

with soap and water. Home appliances have gained from paint progress, too, thanks to heat-resistant enamel and tough enamel finishes that resist scuffing, staining, grease and boiling water.

As a result of such important advances, paint sales have more than doubled since 1941—from \$617 million to \$1.4 billion.

Through constant research and development, encouraged by free competition, paint manufacturers are making brilliant contributions toward brightening and enriching the lives of us all.

### BANKERS TRUST COMPANY

16 WALL STREET, NEW YORK 15, N. Y.

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION



# New Sentinels

## for American Sea Power

Bigger, faster—superior in many ways to any previous class of U. S. Navy destroyers—the U.S.S. Mitscher was launched early this year at the historic Bath Iron Works shipyard in Maine.

First of a new class of "super" destroyers, the Mitscher is 493 feet long and is rated at 3670 tons displacement. A second ship of this class, also under construction at Bath, is scheduled for launching this month.

In their power plants, as in all other respects, these ships reflect the results of the Navy's continuing studies and tests of new developments. Thus the Mitscher and her sister ship will be the first U. S. vessels "of the line" to be powered by boilers of the *controlled circulation* type. Such boilers, designed and built by Combustion Engineering-Superheater, Inc., have been the subject of extensive testing in the Naval Boiler and Turbine Laboratory for some years past.

The first *power station* boiler to employ the controlled circulation principle was also built by Combustion, and during the past two years, a number of leading utilities have ordered boilers of this type. Among these is the first boiler in the country designed for a pressure as high as 2650 pounds per square inch.

The development of the Controlled Circulation Boiler is another example of Combustion's design leadership in the field of steam generation . . . leadership that makes it worth your while to consider C-E Boilers for your steam requirements whether large or small . . . marine, utility or industrial.



**COMBUSTION ENGINEERING—SUPERHEATER, INC.**

Combustion Engineering Building • 200 Madison Avenue • New York 16, N. Y.

ALL TYPES OF STEAM GENERATING, FUEL BURNING AND RELATED EQUIPMENT

B-584-A

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BUSINESS WEEK • JULY 19 • NUMBER 1124

(with which are combined *The Annalist* and the *Journal of the American Academy of Political Science*) is published weekly by the McGraw-Hill Publishing Company, Inc., James H. McGraw (1860-1945), Founder, in Publishing Center, 55-125 West Broadway, Albany, N. Y.; W. E. Doherty, Executive Vice-President; W. E. Doherty, Vice-President and Treasurer; Curtis W. McGraw, President; Wilard Chevalier, Vice-President and Treasurer; John H. Chevalier, Secretary; Paul Montgomery, Senior Vice-Presidential Editor; Frank J. Smith, Editorial Director; Nelson Bond, Vice-Presidential and Director of Advertising.

Marine Midland has  
"next-door-neighbor"  
knowledge of business  
and people in 55  
New York State  
Communities!



**A local Marino Midland Bank officer will gladly help your new manager get established in JAMESTOWN.**

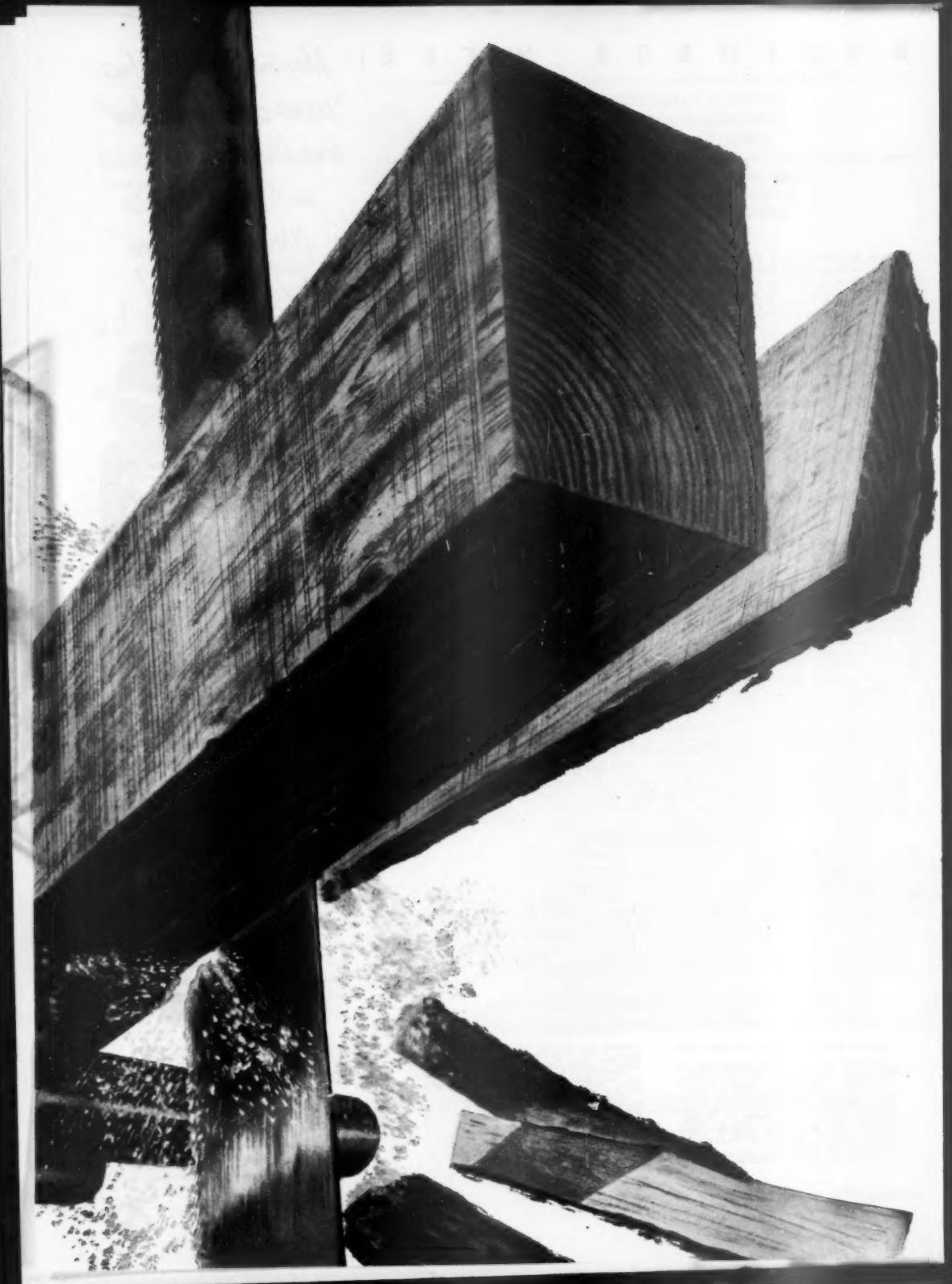
Guidance and advice are frequently needed when a man is transferred to a new territory. In New York State, help in learning the "layout" of the town, or perhaps in finding a house, is often available when The Marine Midland Trust Company of New York is your bank.

The 14 Marine Midland Banks have 114 offices distributed throughout the state. Each officer knows his own area and the people in it as only a local resident can. Let us show you how this "next-door-neighbor" knowledge can be useful to your business.



*The*   
**MARINE MIDLAND**  
**TRUST COMPANY**  
*of New York*

**120 BROADWAY • NEW YORK**  
Member Federal Deposit Insurance Corporation



**A nontechnical report to management  
concerning profits**

# **They did what you can do to make money**

To turn waste into a salable product is one place management can look for added profits.

This western lumber mill solved the basic problem of "how can the continuous flow of bark and wood best be utilized?". . . but doing it economically in a new plant raised this specific electrical problem:

"All of the complex machinery, processes and material handling must operate as a unit as well as separately."

Together with plant and construction executives, equipment builders and consulting engineers, Westinghouse *creative engineers* helped supply the answers and most of the major electrical apparatus. This included everything from power and control centers to sectional drives and motors ranging in size from one to 450 horsepower.

Result: A new modern plant that utilizes lumber by-products to turn out millions of square feet of salable—and profitable—hardboard.

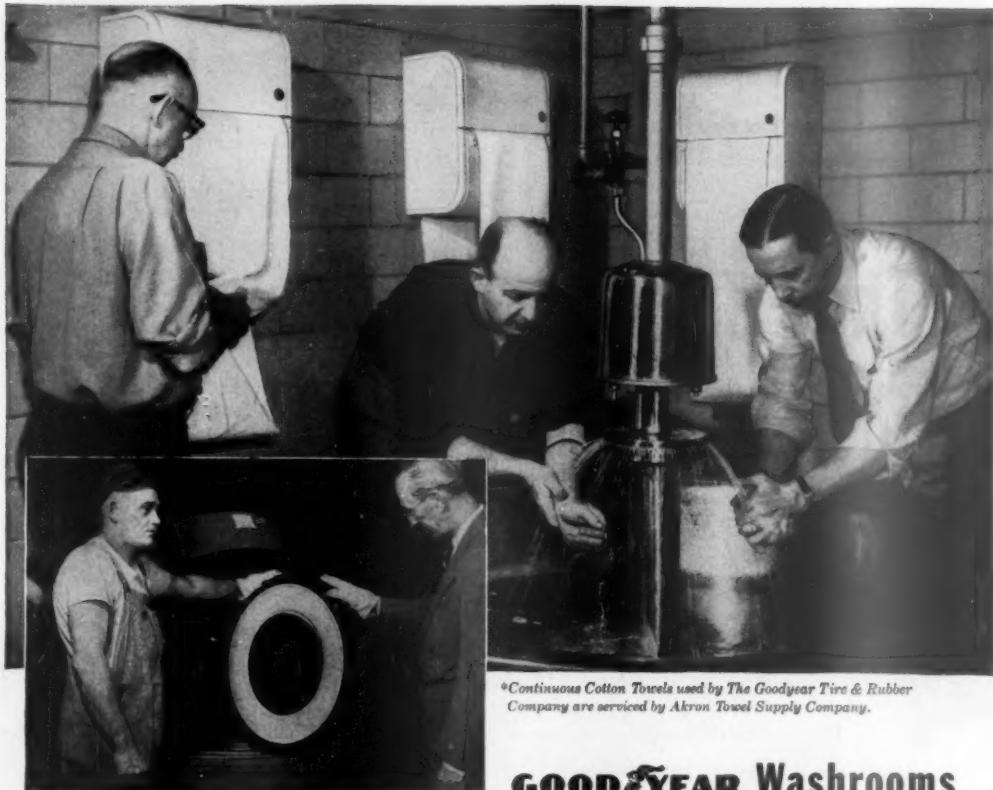
This same *creative engineering* applies to every industry, every manufacturing process. It is a part of the total Westinghouse services you can use to your profit . . . for application, installation, emergency or periodic maintenance.

We want to do the kind of planning with you that will apply these engineering services to your problem. . . . to save time, to save money, to make money, to produce more with what you have. Westinghouse Electric Corporation, Pittsburgh, Pa.

**YOU CAN BE SURE...IF IT'S**

## **Westinghouse**





\*Continuous Cotton Towels used by The Goodyear Tire & Rubber Company are serviced by Akron Towel Supply Company.

## GOOD, YEAR Washrooms

### Are Kept Cleaner and Tidier with Cotton Towels\*

#### Here's How Linen Supply Works...

You buy nothing . . . your linen supply dealer supplies everything. The low cost includes cabinets, pick-up and delivery, provides automatic supply of freshly laundered towels and uniforms. Quantities can be increased or decreased on short notice. Local service is listed in your classified book under SERVICELINEN, LINEN SUPPLY or TOWEL SUPPLY.



• The world's largest producer of rubber products, Goodyear Tire & Rubber Company, manufactures a multitude of things for home and industry, from rubber heels and soles to conveyor and transmission belts. The building of automotive and aviation tires is, however, their biggest business. Shown above is a Goodyear white wall tire being removed from a curing press.

Back in '45 Goodyear installed continuous cotton towels in washrooms at Akron to help keep these busy service rooms cleaner and tidier. *Goodyear maintenance supervisors are now more than satisfied that cotton towels better serve their needs for efficient towel service.* Their employees appreciate the greater comfort afforded by soft, absorbent cotton towels.

Whatever your towel problem . . . whether you operate a factory, institution, office or store . . . you can be sure that soft, gentle, absorbent cotton towels will do the best job in promoting employee morale, building customer good will, increasing tidiness in your washrooms and cleanliness among your employees.

For free booklet that tells how cotton towel service will save you money and increase sanitation and efficiency, write Fairfax, 65 Worth Street, New York 13, Dept. B.

## Fairfax-Towels

### Clean Cotton Towels... Sure Sign of Good Management

A PRODUCT OF WEST POINT MANUFACTURING CO. • WELLINGTON SEARS CO., SELLING AGENTS, 65 WORTH ST., NEW YORK 13



## They've just got to match!

The twins won't have to worry. The colors of their brand new birthday dresses match *right on the button!* For the American dye industry licked the basic problems of color uniformity long before they were born.

Precise color matching is just one of the demands that must be met by the nation's dye manufacturers. The rainbow of dyestuffs they produce must be fast to light, laundering and wear. They must apply easily and uniformly to the modern synthetic fiber like nylon, as well as cotton, wool, linen and silk. Indeed, few other products in the world demand such a high degree of *quality control* in their manufacture.

This was one of the many factors we had in mind

when we recently formed our Fine Chemicals Division for manufacturing dyestuffs. As a basic producer of coal chemicals, including the important intermediates from which a great many dyes are made, we're in a position to closely control and maintain the high quality and purity of Pittsburgh Dyestuffs from coal to the finished colors.

This unique basic position—which offers definite advantages to buyers of Pittsburgh agricultural chemicals, plasticizers, protective coatings, and the products of our other integrated divisions—will soon be helping the nation's textile industry to produce tomorrow's brighter and better materials.

**The Pittsburgh Coke & Chemical Co.**

is a basic producer of

**COAL CHEMICALS**      **PROTECTIVE COATINGS**  
**AGRICULTURAL CHEMICALS**  
**PLASTICIZERS**      **ACTIVATED CARBONS**  
**COKE**      **CEMENT**      **PIG IRON**



**PITTSBURGH**  
**COKE & CHEMICAL CO.**

One of Pittsburgh's oldest and largest

WBD 4232

# VISIBILITY UNLIMITED

with  
**MOBILIFT  
 FORK LIFT  
 TRUCKS**

A MOBILIFT operator can see the fork-ends when he picks up a load...he can see where he's going! There's no groping for the load...no craning around vision-obstructing cylinders. Unlimited visibility between Mobil-chain uprights is just ONE reason you get faster, safer, more economical materials handling with Lev-R-Matic Drive MOBILIFTS. Here are other reasons why you can handle materials at less cost with MOBILIFT:

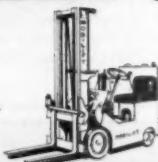
- Lev-R-Matic PUSH-PULL controls for forward-back movement, lifting and tilting. NO GEARS TO SHIFT.
- 360° steering wheel makes zero inner turning radius possible with stand-up models.
- Compact design for maximum maneuverability.
- Easy accessibility for servicing and maintenance.
- Powerful 3-cylinder gas engine.

**FOR SAFER  
 FASTER MATERIALS  
 HANDLING**



**STAND-UP  
 MODEL**

2000, 2500, 3000,  
 3500-lb. capacity.  
 63", 72", 83" Masts  
 Special Masts to order.  
 Write for complete  
 specifications.



**SIT-DOWN  
 MODEL**

2000, 3000-lb. cap.  
 63", 72", 83" Masts  
 Special Masts to order.



**MOBILIFT  
 CORPORATION**

835 S. E. MAIN ST., PORTLAND 14, OREGON

2317 W. 18th, CHICAGO • 790 Patterson Ave., E. RUTHERFORD, N. J.  
 1113 Spring St. N. W., ATLANTA • 2724 Taylor St., DALLAS  
 2730 San Pablo Ave., BERKELEY

## READERS REPORT

### No Desperation Move

Dear Sir:

If you will glance quickly at the story (on the consolidation of the advertising staffs of the Atlantic and Harper's in the July 5 issue), you will, I am sure, see that there could be a misinterpretation of the headline and the impression might be created that this was some sort of desperation move in the face of increasing difficulties for the two magazines . . . let me give you one or two examples: (1) What might be considered "lean pickings" for one magazine might be a feast for a different type of magazine. We have agreed here at the Atlantic that we would never let the advertising content run higher than 35% of our total pages because the Atlantic subscriber has endowed our operation to the extent of underwriting 80% of our publishing costs. (2) Not only is the amount of advertising a factor in this picture, but both Harper's and the Atlantic show a definite upward trend in the advertising volume during the last year or so. For example, the Atlantic's volume (without any change in advertising rate) is up 32% for the first six months of this year. The advertising revenue of the Atlantic for the first six months of 1952 is larger than the entire year's revenue for 1948. (3) We have had a guaranteed circulation of 170,000 for the past two years, not 150,000 as mentioned. . . . There also is one fact . . . which I think could have been given more weight as it was not mentioned in the article at all, namely that 60% of the lineage in our magazines comes from advertisers who use them both. In 60% of the cases, we can save time and money for ourselves, the agency and the advertiser.

Sincerely yours,  
 C. B. CROCKETT

PRESIDENT  
 HARPER-ATLANTIC SALES INC.  
 BOSTON, MASS.

Dear Sir:

Re your article "High Brows Find." If these magazines want to increase their circulations, just let them take a look at BUSINESS WEEK's excellent articles, pictures, and lay-out. I am sure if they adopt your style, they will be a success too.

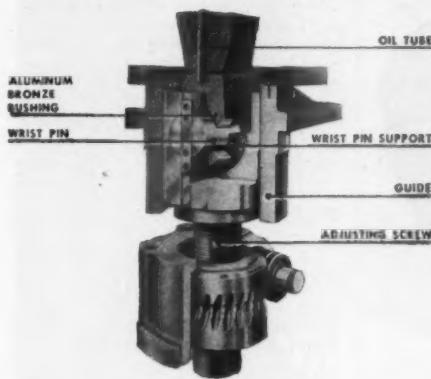
ROBERT MARX  
 ANCHOR PLASTICS COMPANY, INC.  
 NEW YORK, N. Y.

### Slight Correction

Dear Sir:

We were pleased to see the write-up in the June 28 BUSINESS WEEK, page

when you buy presses...  
 take a close look at  
**CONSTRUCTION**

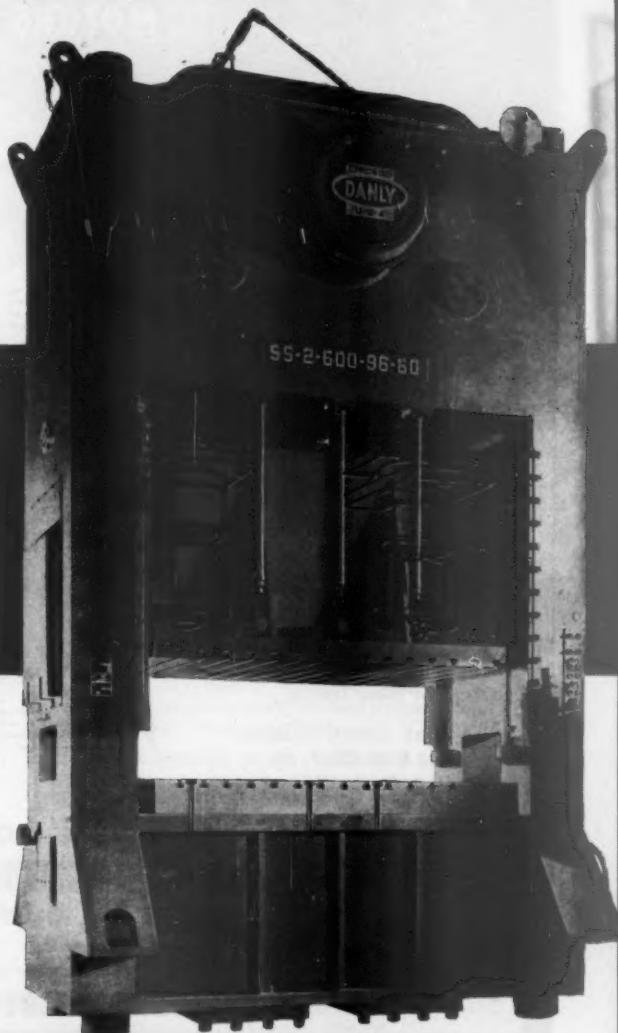


The Danly slide adjustment mechanism is typical of Danly precision construction. This cutaway view shows how the wrist pin is center supported to eliminate bending and how the entire upper assembly is retained within full length vertical guides, permitting closer, longer wearing machine fits at the wrist pin joint.

DANLY'S extra-rigid precision construction decreases deflection and assures slide alignment and accurate closure. Dies wear longer and can be built to closer tolerances . . . stamped parts stay within tight quality control limits for longer production runs at higher operating speeds . . . quality control is easier and less costly.

**DANLY MACHINE SPECIALTIES, INC.**

2100 South Laramie Avenue, Chicago 50, Illinois



**DANLY**  
 MECHANICAL PRESSES . . . 50 TO 3000 TONS  
 HYDRAULIC METALWORKING EQUIPMENT

View of Danly 600 ton Single Action Straight Side Press. Note extra-long oil lubricated gibs.

*It costs less to run a DANLY PRESS!*



Single Action  
Straight Side



Autifeed



Underdrive  
Single, Double,  
Triple Action



Gap Frame



Double Action  
Straight Side

## IMPROVED PRODUCT PERFORMANCE . . .

*Lamb Electric*  
SPECIAL APPLICATION  
FRACTIONAL HORSEPOWER MOTORS

*...an end result of special engineering*

• A Lamb Electric Motor contributes importantly to the good performance of a product by providing the exact mechanical and electrical requirements for the particular application.

Other benefits frequently gained by the use of a Lamb Electric motor — because it is specially engineered for the product — are, reduced product weight, compactness, improved appearance and lower cost.

Our experience in designing and building motors for many thousand applications is available to help you obtain these results.

The Lamb Electric Company  
Kent, Ohio

In Canada: Lamb Electric-Division of Sangamo Company Ltd.—Leaside, Ontario

THEY'RE POWERING AMERICA'S *Finest* PRODUCTS

*Lamb Electric*  
SPECIAL APPLICATION  
FRACTIONAL HORSEPOWER MOTORS



Pocket-size gear motor for machine applications requiring low output shaft speeds with relatively high torque.



Universal motor with shafts carried on double row ball bearings; developed for use as a high-speed grinder.



Electrically governed, precision-built motor with accurate speed adjustment. Ideal for instrument use.

68, on the newer types of highly reinforcing carbon black. . . . If we may correct you slightly, we would point out that Godfrey L. Cabot, Inc., has had available for months its new black, giving some 20% added roadwear. Ours . . . is available in carload quantities from a production unit located in Pampa, Texas. We suspect that ours is the only super reinforcing black that is available in really commercial quantities.

Very truly yours,

C. A. STOKES

GODFREY L. CABOT, INC.  
BOSTON, MASS.

### Welcome

Dear Sir:

On page 140 of your June 21, 1952, issue of BUSINESS WEEK you had an article entitled, "More-Than-100,000 Stockholders Club," in which you listed twenty-one corporations which have more than 100,000 stockholders. The Southern Company was not included in the list. The Southern Company has approximately 115,000 stockholders and should therefore have been included.

Very truly yours,

L. H. JAEGER

TREASURER  
THE SOUTHERN COMPANY  
NEW YORK, N. Y.

Dear Sir:

The next time you have occasion to list companies with more than 100,000 stockholders (June 21 issue, page 140), we would appreciate your including Philadelphia Electric Company. The number of our stockholders is 102,533.

Sincerely yours,

ROBERT C. COX

PUBLICITY MANAGER  
PHILADELPHIA ELECTRIC COMPANY  
PHILADELPHIA, PA.

### Looking Better

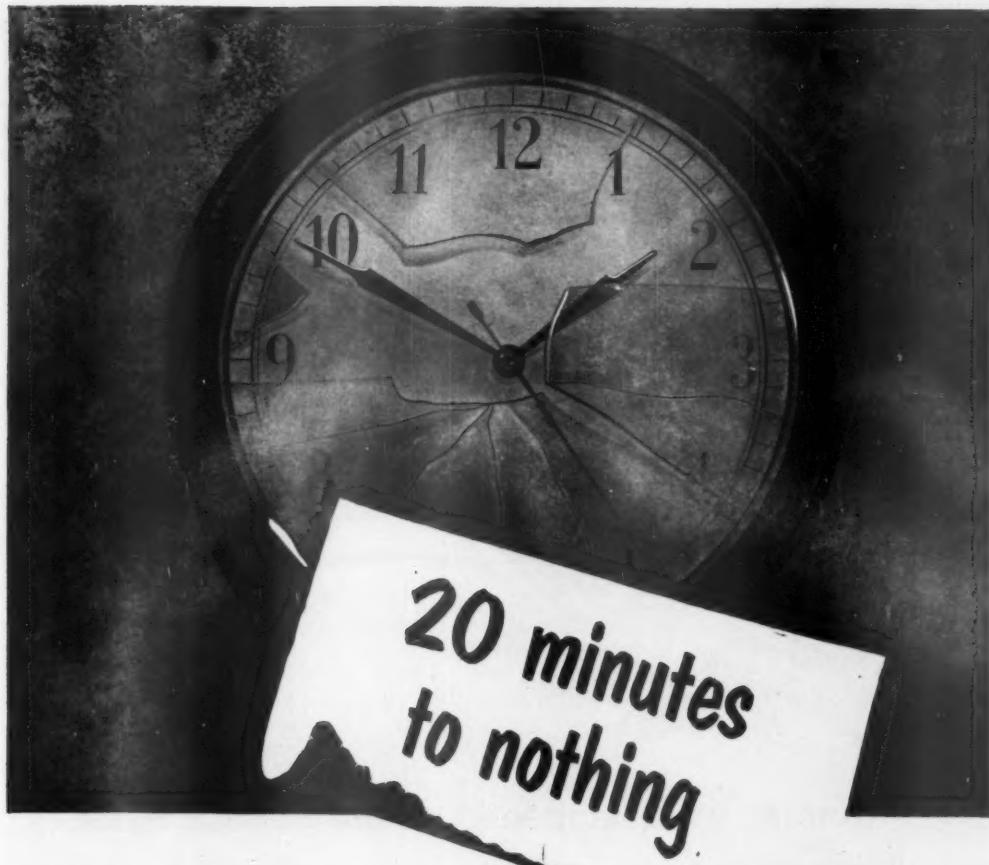
Dear Sir:

In your June 28th issue, page 126, you appear to have disregarded adjustment for 2 for 1 stock splits in Babcock & Wilcox and in Douglas Aircraft. The substantial losses you have indicated for February investors in these issues in actuality turn into important gains if adjustment is made.

Sincerely,

NORVIN GREENE  
LANCASTER & NORVIN GREENE  
NEW YORK, N. Y.

• You are so right. And we also overlooked the fact that Bigelow-Sanford had split its stock 1½ for 1. Apologies all around.



**You could know the plant... 20 years of steady growth  
... 20 years of work, brains and money... then in 20  
minutes a little fire got away and reduced it all to  
nothing.**

But, your larger size fire hazards can be protected very efficiently at a reasonable cost, thanks to C-O-TWO Low Pressure Carbon Dioxide Type Fire Extinguishing Systems. Simple piping, running from one centrally located storage tank, instantly transports clean, non-damaging, non-conducting carbon dioxide anywhere in the plant area... to flammable liquids, electrical equipment, storage spaces, manufacturing processes and record vaults. Fire at any protected location is extinguished in seconds with an absolute minimum of expense and interruption.

Flexibility is the keynote with these C-O-TWO Fire Extinguishing Systems... the low pressure carbon dioxide

storage tanks range in capacities from one to fifty tons... discharge facilities can either be manual mechanical, manual electric, automatic mechanical, automatic electric or a combination of these... especially installed to fit your particular needs. Future plant expansion is easily and economically provided for by initially installing an oversized low pressure carbon dioxide storage tank and adding the supplementary discharge facilities at a later date.

Whether it's fire detecting or fire extinguishing... portables or built-in systems... C-O-TWO means experienced engineering that assures you of the best type equipment for the particular fire hazard concerned.

#### **WHEN BUSINESS STOPS... INCOME STOPS!**

Don't take chances with your investment. Secure the benefits of highly efficient fire protection engineering today... our extensive experience over the years is at your disposal without obligation. Get the facts now!



**MANUFACTURERS OF APPROVED FIRE PROTECTION EQUIPMENT**

Squeez-Grip Carbon Dioxide Type Fire Extinguishers  
Dry Chemical Type Fire Extinguishers  
Built-In High Pressure and Low Pressure Carbon Dioxide  
Type Fire Extinguishing Systems  
Built-In Smoke and Heat Fire Detecting Systems

#### **C-O-TWO FIRE EQUIPMENT COMPANY**

**NEWARK 1 • NEW JERSEY**

**C-O-TWO FIRE EQUIPMENT OF CANADA, LTD. • TORONTO 8 • ONTARIO**

**Sales and Service in the Principal Cities of United States and Canada**

**AFFILIATED WITH PYRENE MANUFACTURING COMPANY**



**"I wonder what happened to me !", said Alice**

ALICE in Wonderland ate the magic cake and grew until she was more than nine feet tall. Our National bureaucracy also seems to have partaken of the magic cake of power. Bureaus in our government have grown in number and scope until their activities now control, to a great extent, the lives of all individual Americans. Department after department adds more and more people -- state, justice, commerce, treasury -- not to mention those sprawling emergency born agencies of price control, N.P.A. and other alphabetical subdivisions.

The number of employees of our federal, state and local governments continues to grow. During many recent months, personnel was added

to the federal payroll at the rate of 1,500 daily.

What is the reason for this mushrooming? The Korean War? Threat of war in Europe, Southeast Asia, or the Middle East? Obviously not! A glance at the federal budget gives the answer. The estimated cost of all governmental functions for the fiscal year 1952 is in excess of 70 billions of dollars, an increase of 26 billions, or approximately 60% more than last year.

When will it end? Only you, the individual citizen, who carries the bureaucratic load on his back, can stop it. It will end when enough patriotic men and women demand from congress that the Washington Wonderland start shrinking back to reasonable proportions.

### The Youngstown Sheet and Tube Company

General Offices - Youngstown 1, Ohio

Export Offices - 500 Fifth Avenue, New York

**MANUFACTURERS OF CARBON ALLOY AND STOOL STEELS**

The steel industry is using all its resources to produce more steel, but it needs your help and needs it now. Turn in your scrap, through your regular sources, at the earliest possible moment.



# More go per gallon

Your automobile motor has more than 200 parts. They require close to 900 precision grinding operations.

Your motor's crankshaft, for instance, must be dimensionally true within .001 inch. It gets this accuracy from Norton ALUNDUM® grinding wheels on high production Norton grinding machines. The finishing touch is given with a special Norton lapping machine, using Behr-Manning Lightning ADALOX® coated abrasive. Such true, smooth surfaces make parts fit . . . cut friction . . . give you "more go per gallon."

The automotive industry is only one of many industries which rate Norton and Behr-Manning products essential to their production. As the world's largest manufacturers of abrasives and abrasive products, Norton and Behr-Manning keep seeking better ways to help *all* industries make better products.

**NORTON** makes abrasives, grinding wheels, refractories, Norbide grain and molded products, grinding and lapping machines, non-slip floors. Norton Company, Main Office and Works, Worcester 6, Massachusetts.

**BEHR-MANNING** makes abrasive paper and cloth, oilstones, abrasive specialties, Behr-Cat brand pressure-sensitive tapes. Behr-Manning Corporation, Division of Norton Company, Troy, New York.

*Plants, Distributors and Dealers the world over*



\*Trade-Marks Reg. U. S. Pat. Off. and Foreign Countries



J. HOWARD BAKER is General Superintendent of the Behr-Manning Abrasive Division. His exceptional ingenuity in 34 years' service has resulted in many outstanding improvements in the quality of Behr-Manning products.



HARRY O. ANDERSON has completed 51 years with Norton. Now Chief Grain Inspector of the Abrasive Division, he has originated and patented many improvements in abrasive processing and quality control.

**NORTON**



*Making better products to make other products better*

## NORTON • BEHR-MANNING

# WHY LYON

## IS A LOGICAL CHOICE for Sheet Metal Contracts!

2 STRATEGIC  
PLANT LOCATIONS  
in Aurora, Ill., and York, Pa.,  
both geared for special parts  
and assemblies in addition to  
essential standard products.

EQUIPMENT  
includes batteries of shears—  
punch and draw presses—spot,  
arc and gas welders—routers,  
and drillers—annealing fur-  
naces—bake ovens.

3800  
SUBCONTRACTS  
DURING WORLD WAR II

Special parts and assemblies for air-  
craft, ships, tanks, ordnance—a wide  
variety of types, shapes and sizes.

### CAPACITY

600,000 square feet. Both  
plants designed for stream-  
lined production and assembly  
methods. Special toolrooms  
produce jigs and dies for spe-  
cial runs.

### FIELD ENGINEERING SERVICE

Competent LYON Representa-  
tives, headquartered in district  
offices throughout the country,  
serve as liaison from start to  
finish of every special contract  
assignment.

- Can you use LYON's experience and capacity?  
For complete information contact your nearest  
LYON Field Representative—or

### MAIL COUPON

for this very comprehensive 20-page brochure. It gives  
the complete story of LYON's facilities...tells why LYON  
is geared to handle sheet metal contracts better.



LYON METAL PRODUCTS, INC.  
710 Monroe Ave., Aurora, Illinois

Please send me a copy of "Craftsmen in Sheet Metal."

NAME \_\_\_\_\_

TITLE \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

ZONE \_\_\_\_\_ STATE \_\_\_\_\_

LYON PRODUCTS STILL SERVING INDUSTRY • BUSINESS • INSTITUTIONS • HOMES

- Shelves
- Kitchen Cabinets
- Tool Boxes
- Toolroom Equipment
- Recycling Bins
- Work Benches
- Tool Stands
- Lockers
- Cabinet Benches
- Economy
- New Freedom
- Wood Working
- Bench Drawers
- Hooper Bins
- Sheds
- Storage Cabinets
- Locker Rocks
- Kitchens
- Benches
- Service Carts
- Shop Boxes
- Bus Units
- Drawing Tables
- Parts Coves
- Display Equipment
- Hanging Cabinets
- Spring Files
- Tool Trays
- Bus Racks
- File Cabinets
- Drawing Cabinets
- Tool Boxes
- Work Benches
- Tool Stands
- Tool Trays
- Hooper Bins
- Shop Boxes
- Tool Trays
- Work Benches
- Tool Stands
- Tool Trays
- Hooper Bins
- Shop Boxes
- Tool Trays

## In BUSINESS this WEEK . . .

### • Eisenhower . . .

. . . is new to politics, he has a new team with him, he has a revitalized party behind him. Here's what it all adds up to for business. P. 28

### • Boston Boasts . . .

. . . it is the Hub of the World's Wool. Some 70% of all the wool the U. S. uses is handled in an atmosphere of antiquity and roll-top desks—but there's no doubt Boston is tops in the trade. P. 48

### • Industry Leans . . .

. . . heavily on psychology for help in picking personnel these days. But in this second of a series on psychological testing the psychologists themselves admit they have doubts. What they want: more research. P. 82

### • Prospects for . . .

. . . selling abroad stay strong. And the U. S. continues to buy heavily from abroad. The one big hitch: Europe is still very short of dollars. Despite that, it will be a good year for traders. P. 146

### • St. Louis Slums . . .

. . . are one of the city's biggest and oldest problems. Now it's beginning to make headway in rebuilding. But results are slow to show. P. 162

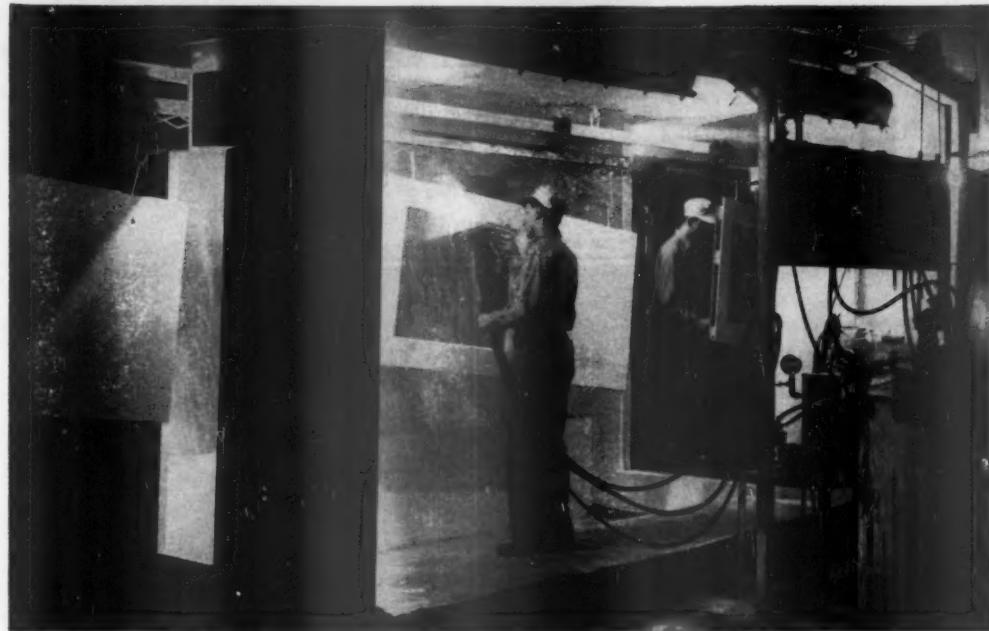
### • Planes Are Rolling . . .

. . . off the assembly lines. The U. S.'s huge aircraft program is beginning to pay off—despite all the talk you've heard of hitches and hassles. P. 170

## THE DEPARTMENTS

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# FINISHING



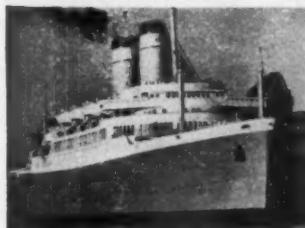
METAL OFFICE DOORS are sprayed on this production line with a Du Pont DULUX Primer to guard against rust and to form a sound foundation for topcoats.

## Office-Partition Makers Put DULUX On Their Metal

Manufacturers of metal office equipment—wall partitions, doors, filing cabinets, furniture, business machines—have found that Du Pont's famous DULUX finishes give top performance from every angle. On the production line, DULUX Primers and Topcoats have excellent spraying characteristics. In the showroom, the gleaming beauty of DULUX helps promote sales. And over the years, DULUX keeps its

gleaming beauty to build long-term customer good will.

DULUX finishes for office equipment are among the more than 12,000 Du Pont finish formulas serving industry today. Whatever your finish requirements, you can get expert help by contacting the Du Pont sales technician in your area . . . or by writing E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington 98, Delaware.



NEW LUXURY LINER is finished with DULUX to keep appearances up, costs down.



THIS DEVICE helps Du Pont chemists accurately measure and control finish viscosity.



SALE IS CLINCHED when salesman tells bride-to-be about the durable Du Pont Finish.

## Du Pont Industrial Finishes

Chemically engineered to do the job better.

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150th Anniversary  
Better Things for Better Living  
...through Chemistry

# Chemical Covering

## CHEMICAL PROBLEM...

to develop a series of products that impart flexibility to vinyl plastic coatings and sheetings.

## SOLUTION...

... Hercoflex® plasticizers. These products of Hercules research put the flexibility and pliancy in vinyl coatings and sheeting and *keep them there* over long periods of exposure without cracking, drying out, or softening. Hercoflex keeps vinyl coatings pliable even in sub-zero weather.

## RESULT...

... automobile upholstery that withstands the wear and tear of outdoor service . . . heat, cold, abrasion, moisture . . . and can easily be cleaned. Today, vinyl plastics made with Hercoflex are used for rainwear, luggage, handbags, shower curtains, garden hose, furniture, and wire coating. Other Hercules chemicals, such as ethyl cellulose and chlorinated paraffin, are also used advantageously in the processing of certain vinyl sheetings and coatings.



## Hercules' business is solving problems by chemistry for industry...



...textiles, paper, rubber, insecticides, adhesives, soaps, detergents, plastics, paint, varnish, lacquer, to name a few, use Hercules® synthetic resins, cellulose products, chemical cotton, terpene chemicals, rosin and rosin derivatives, chlorinated products and other chemical processing materials. Hercules® explosives serve mining, quarrying, construction, seismograph projects everywhere.

## HERCULES

HERCULES POWDER COMPANY 968 Market St., Wilmington 99, Del.  
INCORPORATED  
Sales Offices in Principal Cities

# BUSINESS OUTLOOK

BUSINESS WEEK  
JULY 19, 1952



Steel "disemployment" was spreading rapidly this week as the government once again stepped in to try and end the strike.

This time, finally, there was some realism to the approach. Washington acknowledged that prices would have to go up with wages.

Such a concession, in April, could have settled the dispute. But, by this week, the stumbling block had become the union shop.

About 11½-million tons of steel had been lost by July 15. Before the month is out, even with a settlement, the loss will come to something like 14-million tons—close to seven weeks' output at capacity.

Suppose "natural" demand now is only 70% of capacity (a dubious assumption). It would then take 20 weeks to make up the deficit.

That's your guarantee of capacity steel operations to year-end.

Auto assembly lines, limping last week, were no more than crawling this week. They will be virtually stopped by Monday. And autos are the symbol of the civilian economy—output, employment, payrolls.

It's getting harder to go out and buy any kind of new auto you might want—and the seller writes his own ticket on price and trade-in.

Dealers were down to 277,000 new cars (on hand and in transit) on July 1, says Automotive News. That was down from 302,000 a month earlier and compared with 448,000 a year ago.

In June this year, they got almost 400,000 new cars to sell; but last year, deliveries were 475,000. This month, they'll get a skimpy 150,000.

Steel's stoppage ends all arguments over whether there would have been a scarcity of new cars this summer anyhow. Dealers' short stocks on July 1 indicate there would have been. But there's no way now to resolve that debate.

You can begin to see the steel strike's effects in power output.

Last week—with radios and TV sets going long hours for the GOP convention, and air conditioners, fans, and refrigerators revved up to combat the heat—electric output was only 3.7% over a year ago. That was the smallest gain for any week so far in 1952.

The Central Industrial Region, which is dense with steel users, had a decline of 2.6% against a plus of 2½% the week before. And this despite the late hours people were keeping in Chicago.

Zinc is piling up a bit. Producers added about 30,000 tons to their stocks last month. Much of that represented the dip in galvanizing as steel was shut off. This month is seeing less demand for "special high-grade" zinc as auto use of die castings dries up.

Higher steel prices are going to be more inflationary than they would have been a few weeks ago. The reasons are simple:

(1) Most industries are out of steel. Manufacturers who might have balked at a boost earlier now will pay to rebuild inventory.

(2) Consumer demand has picked up. Plants' inventories of finished goods are melting. Sales managers no longer are down in the mouth. This will make it easier to pass along the higher cost of steel.

# BUSINESS OUTLOOK (Continued)

BUSINESS WEEK  
JULY 19, 1952

More and more lines are beginning to feel stirrings of the revival in consumer demand (page 27).

No records are being broken yet. Nevertheless, it's a heartening pickup, even though the reference point in some cases is utter stagnation.

You've heard a good bit about the optimism in textiles, clothing, shoes, furniture, and appliances. To these you might add such items as cameras and photographic equipment, used cars, and auto batteries.

There still are soft spots, but the fewest in a long time.

Demand for consumers' durable goods apparently picked up before most people realized. Retailers' sales of all durables bounced in May to nearly \$4.6-billion (seasonally adjusted). That was \$300-million better than April and the highest since March of last year.

Improved retail volume has helped manufacturers cut inventory.

Dollar value of factory shipments in April and May reached the highest level in more than a year. (The showing, in units, undoubtedly was even better, allowing for price declines which come to about 4% at wholesale.)

And in May, for the first time since before Korea, manufacturers' inventories went down. A small drop, to be sure—but a drop just the same.

Income lost because of steel is a threat to store sales. But consumers' confidence in future earning power hasn't been shaken so far.

Thus retail sales are up, even in Pittsburgh. (Ignore last week's dip; people were glued to TV sets and forgot about shopping needs.)

But consumer income, at an annual rate of \$263.4-billion in May, was clipped by about \$2-billion by steel payrolls alone during June. Spreading layoffs in July mean just that much more in payroll losses.

Prices, like store sales, fail to reveal any deflationary trend.

Not that there has been any upturn. It's simply that prices have, on the average, stopped going down. The few substantial declines (such as rubber) have about been balanced by the scattered gains (as in wool).

Improvement in demand for textiles came too late to show much in last month's cotton consumption (nor will it make any great impression during July, due to widespread vacations in the industry).

Mills in the United States used 696,000 bales of cotton in June. That was a little better than in May, but down from 817,000 a year ago.

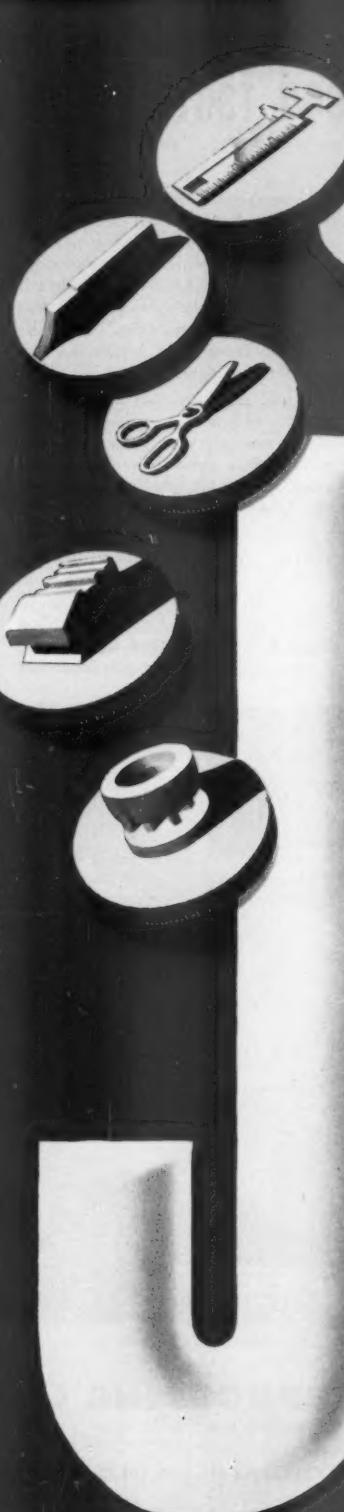
Price difficulties seem to have popped up in plywood again.

Announcing no action on its common dividend this week, Atlas Plywood Corp. blamed unsettled prices in fir plywood on the West Coast. This has slopped over into hardwood plywood which Atlas makes.

Mortgage regulations must be removed after housing starts have averaged less than a 1.2-million annual rate for any three months—in other words, 100,000 a month for a three-month period.

We're holding above that, but not by much. In June, 106,000 dwelling units were started; the month before, the figure was 107,000.

Later on, the normal seasonal trend makes removal certain.



people profit when they  
specify our special steels

Companies that manufacture all types of products from band saws to twist drills and glass molds to coining dies have come to appreciate the kind of service they get at Jessop. Back of every order is a new system of *quality control and use analysis* designed to make sure that each steel is tailored to its exact application. If your organization employs the use of special steels, you'll find it pleasant and profitable to call on a vigorous and ambitious concern that wants your patronage on the basis of merit and is willing to go out of its way to keep it. Write to us.

HIGH SPEED STEELS • HIGH SPEED BITS • PRECISION GROUND FLAT STOCK • HIGH SPEED AND ALLOY SAW STEELS • HOT WORK DIE STEELS • COLD WORK DIE STEELS • CARBON AND ALLOY STEELS • STAINLESS AND HEAT RESISTING STEELS • VALVE STEELS • STAINLESS-CLAD STEELS • CAST-TO-SHAPE STEELS • COMPOSITE TOOL STEELS • ARMOR PLATE

# JESSOP

STEEL COMPANY • WASHINGTON, PENNSYLVANIA

# Good office furniture is like good factory tools

AMERICA LEADS THE WORLD in industrial production, not because American factory workers put forth more human energy in their jobs, but because of better tools and methods.

The same idea can be true of offices. Good metal office furniture such as Super-Filer — the mechanized file, Goodform Aluminum Chairs, correctly adjusted to the individual, and Mode-Maker desks, properly fitted to the job, will get a great deal more work done in any office without the expenditure of more human energy.

Not only will GF modern metal business furniture increase office productivity, but it will promote better employee health and morale as well as improve customer prestige.

It costs you a minimum of \$30,000

per average office employee in salary, floor space and general overhead, in any 10 year period — the normal period during which office furniture is charged off the books. Wouldn't it be a wise investment to provide that employee with good office "tools" so as to increase your return on the \$30,000 fixed expense?

It will probably cost between 1% and 2% of this fixed expense to completely re-equip your office with good metal office furniture that would quickly pay for itself and provide big dividends thereafter.

Get the facts so you can decide whether good metal office furniture would be a good investment for you. Call your local GF distributor or write The General Fireproofing Co., Dept. B-7, Youngstown 1, Ohio.

**GOOD metal business  
furniture is a  
GOOD investment**



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1902 1952

FIFTY YEARS OF PROGRESS

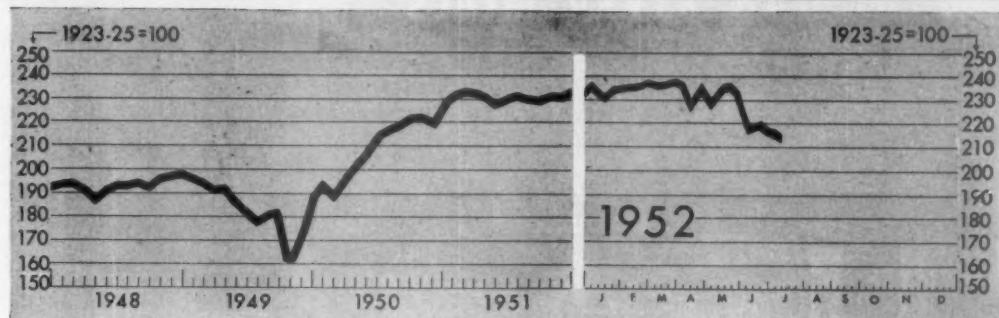


## GENERAL FIREPROOFING

Foremost in Metal Business Furniture

MODE-MAKER DESKS • GOODFORM ALUMINUM CHAIRS • METAL FILING EQUIPMENT • GF STEEL SHELVING

# FIGURES OF THE WEEK



## Business Week Index (above) . . . .

Latest Week	Preceding Week	Month Ago	Year Ago	1946 Average
*215.2	217.2	219.3	230.7	173.1

### PRODUCTION

Steel ingot production (thousand's of tons) . . . . .	314	295	252	2,037	1,281
Production of automobiles and trucks . . . . .	73,742	186,036	130,544	117,747	62,880
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands) . . . . .	\$55,037	\$55,469	\$47,102	\$62,760	\$17,083
Electric power output (millions of kilowatt-hours) . . . . .	6,988	6,478	7,126	6,739	4,238
Crude oil and condensate production (daily av., thousand's of bbls) . . . . .	6,075	6,102	6,149	6,171	4,751
Bituminous coal production (daily average, thousand's of tons) . . . . .	1,120	1,152	1,264	1,496	1,745

### TRADE

Carloadings: manufactures, misc., and l.c.l. (daily av., thousand's of cars) . . . . .	64	64	68	78	82
Carloadings: all other (daily av., thousand's of cars) . . . . .	40	44	46	59	53
Department store sales (change from same week of preceding year) . . . . .	+4%	+1%	+3%	None	+30%
Business failures (Dun and Bradstreet, number) . . . . .	156	131	175	173	217

### PRICES

Spot commodities, daily index (Moody's Dec. 31, 1931 = 100) . . . . .	437.6	435.4	434.1	475.0	311.9
Industrial raw materials, daily index (U.S. BLS, Aug., 1939 = 100) . . . . .	267.7	267.6	269.2	316.3	198.8
Domestic farm products, daily index (U.S. BLS, Aug., 1939 = 100) . . . . .	354.1	351.2	348.6	363.0	274.7
Finished steel composite (Iron Age, lb.) . . . . .	4,131 $\epsilon$	4,131 $\epsilon$	4,131 $\epsilon$	4,131 $\epsilon$	2,686 $\epsilon$
Scrap steel composite (Iron Age, ton) . . . . .	\$39.33	\$39.50	\$42.00	\$43.00	\$20.27
Copper (electrolytic, Connecticut Valley; lb.) . . . . .	24.500 $\epsilon$	24.500 $\epsilon$	24.500 $\epsilon$	24.500 $\epsilon$	14.045 $\epsilon$
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.) . . . . .	\$2.24	\$2.27	\$2.34	\$2.32	\$1.97
Cotton, daily price (middling, ten designated markets, lb.) . . . . .	39.25 $\epsilon$	39.68 $\epsilon$	40.82 $\epsilon$	39.55 $\epsilon$	30.56 $\epsilon$
Wool tops (Boston, lb.) . . . . .	\$2.10	\$2.05	\$2.05	N.A.	\$1.51

### FINANCE

90 stocks, price index (Standard & Poor's) . . . . .	198.7	198.2	193.3	173.6	135.7
Medium grade corporate bond yield (Baa issues, Moody's) . . . . .	3.50%	3.50%	3.50%	3.53%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate) . . . . .	21-21%	21-21%	21-21%	21-21%	3-1%

### BANKING (Millions of dollars)

Demand deposits adjusted, reporting member banks . . . . .	51,750	51,708	53,202	49,667	††45,210
Total loans and investments, reporting member banks . . . . .	76,728	77,493	73,956	70,099	††71,147
Commercial and agricultural loans, reporting member banks . . . . .	20,580	20,567	20,518	19,120	††9,221
U. S. gov't and guaranteed obligations held, reporting member banks . . . . .	33,364	33,582	32,060	30,697	††49,200
Total federal reserve credit outstanding . . . . .	24,465	24,155	24,128	24,267	23,883

### MONTHLY FIGURES OF THE WEEK

	Latest Month	Preceding Month	Year Ago	1946 Average
Personal income (seasonally adjusted, in billions) . . . . .	May	\$263.4	\$262.5	\$251.4
Farm income (seas-nally adjusted, in billions) . . . . .	May	\$19.5	\$19.6	\$18.9
Exports (in millions) . . . . .	May	\$1,461	\$1,334	\$1,354
Imports (in millions) . . . . .	May	\$835	\$933	\$1,018
Housing starts (in thousands) . . . . .	June	106.0	107.0	132.5
				55.9

\* Preliminary, week ended July 12.

† Estimate (BW—Jul. 12'47, p16).

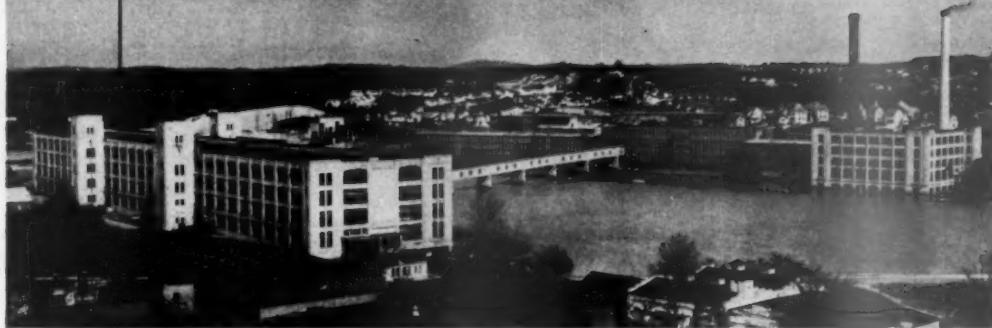
N.A. Not available.

† Revised

‡ Date for "Latest Week" on each series on request

## at DAN RIVER MILLS

world's largest single unit textile plant —



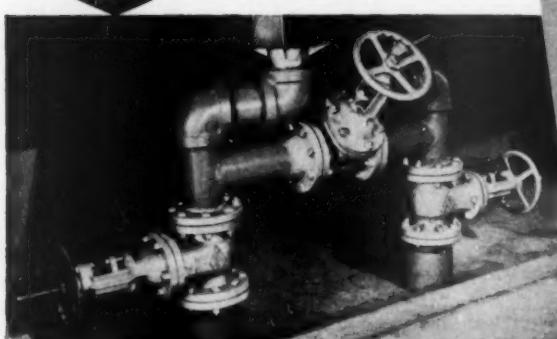
### JENKINS VALVES are standard equipment

Dan River Mills' slogan is "First in Fashion — Foremost in Research". In applying modern methods to the development of better fabrics, Dan River engineers must necessarily maintain the highest efficiency in all mill operations, from fiber preparation to fabric finishing. This, in turn, dictates an exacting selection of all operating equipment.

The decision to standardize on Jenkins Valves was made only after careful comparison of performance in all types of services, and of maintenance expense.

This confidence in the *extra measure* of efficiency and economy provided by Jenkins Valves is shared by plant operating managements in every type of industry.

Despite this extra value, *you pay no more* for Jenkins Valves. For new installations, for all replacements, let the Jenkins Diamond be your guide to lasting valve economy. Jenkins Bros., 100 Park Ave., New York 17. Jenkins Bros., Ltd., Montreal.



In Dan River Mills' 100 acres of floor space, a vast network of pipelines requires all types of bronze, iron, and stainless steel valves for control of steam, water, air and sanitation. Jenkins Iron Valves controlling steam supply to finishing equipment are shown here.

# WASHINGTON OUTLOOK

WASHINGTON  
BUREAU  
JULY 19, 1952



**A new pinch on many profits is ahead.** It will begin showing up once steel output is resumed, with both wages and prices higher.

**The steel makers themselves will be hit.** The higher price they will be allowed won't be enough to cover the extra wage costs.

**And users of steel will be hit, too.** They will have to pay more for the steel they put into their products. But the amount of the extra costs they can pass on will likely be limited.

**It's profit control through forced cost absorption.** The policy of Truman's stabilizers from the start has been to encourage wage raises, then try to head off the price consequences—especially at the consumer level—by being tough about price ceilings.

**Relief from the profit squeeze is available,** but hard to get. The general rule is that no company may raise prices if the earnings of its industry equal 85% of the three best years in the base period, 1946-49.

**Steel could eventually bring a new relief yardstick.** For steel prices will be allowed to rise beyond the ceiling level permitted by the Cepheart Amendment. This is a break in the 85% rule.

So far it's only "a special case for steel." But it will be hard hereafter for the stabilizers to stand pat when others apply for relief. The cost absorption theory won't be abandoned. But chances now are that it won't be used so rigidly as in the past.

**OPS is ready to give ground on steel prices.** It turned down the request of three steel companies for raises to offset the cost of agreements signed with the union. But that was for the record—a buoy to mark the place where price boss Ellis Arnall's steel price policy was sunk.

**For the moment—and only for the moment—OPS is holding out.** It told Weirton, Pittsburgh Steel, and Armco that they could have the raises they were entitled to under the Cepheart formula and no more. That would mean \$2.84 a ton increase on carbon steel, slightly more on higher priced products.

**But mobilization officials already have offered \$5.60 a ton.** Even this is far less than the three companies had in mind.

**Other wage increases will follow steel.** That will add to pressures which continue to push prices gradually higher.

**Aluminum:** Alcoa has settled with the AFL for a 24¢ package, plus a General Motors type of living-cost escalator. CIO demands are still pending.

**Copper:** The unions want 25¢; the companies say "no." There's concern that this dispute will end in a strike.

**Rubber:** Negotiations on higher wages are just getting underway and will be influenced by steel.

**Electrical manufacturing:** Negotiations started in March, but haven't come to much of anything. Both sides want to see the steel outcome.

**Then there's John L. Lewis and coal.** Even if coal stocks are high and prices soft, Lewis will have a hard time sitting by while other unions are winning pay raises.

**Note what's growing out of living-cost escalators:** Some unions now

# WASHINGTON OUTLOOK

(Continued)

WASHINGTON  
BUREAU  
JULY 19, 1952

are pressuring to get these wage "bonuses" worked into their base rates. It's a form of wage insurance, if and when living costs do turn down. North American Aviation has just made 12¢ in living-cost raises a part of its fixed rates. And the Alcoa-AFL contract provides for reopening if living costs slide.

**Economy note:** The House Interior Committee has asked the Attorney General and the Controller General if agencies can be taken into court for spending more than Congress has voted them. The move is aimed at the Bureau of Reclamation which has made commitments beyond its authorization. Behind it is the hope for a test case which will show that Congress has absolute control over executive department spending.

**Truman is the big question mark** as the Democrats gather in Chicago to pick their Presidential ticket. He has said he is out. But as the time for decision on a successor nears, uncertainty mounts among party leaders and hopefuls. The fear is that Truman may step in at the last moment. This is the line of thinking:

**Stevenson** has been regarded as "the Truman man" and as "available." But recently his reluctance has firmed, and he may be out.

**Barkley**, generally regarded as the second runner to Stevenson in party preference, is almost 75. And Truman is said not to favor him.

**Kefauver** has made the best record in the primaries, but the bosses in the big cities don't like him. His investigation was upsetting.

**Russell** is well liked, but geography is against him. He's too far south to be acceptable in the North where the party must win.

**Harriman** talks a Fair Deal line, relies on Truman's program. But few in the party take his bid seriously.

**Kerr and McMahon** are generally considered more a part of the drive to stop Kefauver than as serious contenders on their own.

**Thus the elimination process gets back to Truman.** It may only be a case of eleventh-hour nerves. But it's worth nothing anyhow, for it shows the feeling that Truman can get the nomination if he wants it.

**A southern bolt is a possibility.** The talk is that unless both the party platform and the candidate are satisfactory, the South will rebel. But instead of putting up its own candidate, this time it may try to throw in with Eisenhower by putting him on the ticket as a Democrat in states where the law permits such a maneuver.

**Eisenhower may launch an early campaign.** The usual thing is for the nominees to get going around Labor Day and then drive to November. But the general talks to advisers about starting earlier. He was impressed by the reception he got whistle-stopping from Denver to Chicago.

**U.S. strategy to stop Russia if she attacks** will be resurveyed next month in a new "Key West" meeting of defense chiefs. Out of it will come a bigger role for Naval aviation and maybe the start of a shift by the Air Force away from the big B-36. We are circling the world with air bases, and smaller planes can lug the new A-bombs.



## Minneapolis-Honeywell Regulator Company

### Aerospace Division

2888 RIDGEWAY ROAD • MINNEAPOLIS 12, MINNESOTA • STERLING 8841

June 4, 1952

Mr. J. C. Neemes  
The International Nickel Company, Inc.  
Twin Cities Technical Section  
Development and Research Division  
Northwestern Bank Building  
Minneapolis 2, Minnesota

Dear Mr. Neemes:

I thought you might be interested to know that the constant modulus property of one of the new nickel alloys has enabled us to design an entirely new control for aircraft. This alloy is being used in a bellows which must perform accurately while being subjected to rapid changes in pressure and temperature.

In our materials engineering work, your technical field men have been of real help. Their knowledge and experience on the use, heat treatment and fabrication of nickel alloys has been valuable to us in our work as designers and manufacturers of systems and devices for automatic control or measurement of various phases of aircraft operation. These include flight controls, power controls, fuel measuring systems, gyroscopes, and various other electronic devices.

In designing to the exacting requirements of minimum weight and maximum performance, we constantly investigate and test new materials and manufacturing processes.

The nickel alloys such as stainless steels, Monels, Inconels and others have permitted us to increase such properties as strength, corrosion and heat resistance and obtain low expansion characteristics.

We appreciate your willingness to work with us in solving the problems associated with the expanding requirements of temperature and environmental conditions which our devices must meet.

Yours very truly,

R. R. Gutteridge  
Chief Materials Engineer

RRG/as

At the present time, the bulk of the nickel produced is being diverted to defense. Through application to the appropriate authorities, nickel is obtainable for the production of engineering alloys for many end uses in defense and defense-supporting

industries. We shall continue to make available to industry technical data and service experience on alloys containing nickel, as dissemination of such information can help promote the intelligent utilization of critical materials.



**THE INTERNATIONAL NICKEL COMPANY, INC.** 67 WALL STREET  
NEW YORK 5, N.Y.



## \$50,000 a day- for waiting!

These manufacturers are waiting.

In their factory, the production line has halted, the men are idle. And every day of this inactivity is costing them \$50,000—and more!

What happened? One small breakdown in an important machine has stopped the works!

Even though replacement parts are hundreds of miles away, there's one

way they could cut those days of waiting to *hours*. It's an answer that is saving thousands of manufacturers thousands of dollars every day.

That answer is—Air Express!

Air Express speed means *production* speed. Whether your business is factories, films, or food, you can profit from regular use of Air Express. Here's why:

**IT'S FASTEST** — Air Express gets *top priority* of all commercial shipping services — gives the fastest, most complete door-to-door pick-up and delivery service in all cities and principal towns at *no extra cost*.

**IT'S DEPENDABLE** — Air Express provides one-carrier responsibility all the

way and gets a *receipt upon delivery*.

**IT'S PROFITABLE** — Air Express service costs less than you think, gives you many profit-making opportunities.

Call your local agent of Air Express Division, Railway Express Agency.



Billions of dollars: annual rate: seasonally adjusted

## Consumer Expenditures



WITH SALES PICKING UP, RETAILERS SAY:

## The Customers Are Back

For more than a year, there has been a sour note in U.S. business.

Industry generally has been booming. But all the driving force behind it has come from defense spending and expansion of plant and equipment. The consumer has stubbornly refused to come to the party. Consumer spending—the biggest single force in the U.S. economy—has been dragging since early 1951. And as a result, retailers all over the country have been stuck with outsize inventories of everything from textiles to television.

• **Turnaround**—This week, the sour note is gone. The customers are back in the stores. And in spite of the steel

strike, in spite of brutally hot weather over most of the country, they're buying.

They aren't scrambling for goods as they did in the two frantic sprees that followed the start of the Korean war and the entry of the Chinese. But they are buying at a good, steady clip that gladdens the retailer's heart and bucks up the forecasters who are trying to tell what business will be like for the rest of 1952 and 1953.

• **Savings Down**—You can see this in the statistics that show what consumers do with their disposable income—the amount that they have left after they have made their peace with the tax col-

lector. When the customers zipped up their wallets early in 1951, consumer spending dropped abruptly from an annual rate of nearly \$209-billion to about \$202-billion (chart). Savings—which used to run around 5% of disposable income—climbed up to 9.2% in the third quarter of 1951.

Now, consumer spending is on the way again. Early this year, it just about matched the previous peak. By the end of 1952, it promises to hit an annual rate of \$216-billion. And as it goes up, the savings rate goes down. The best guess is that savings are now back to about 7% of disposable income. Each percentage point drop in savings

means that about \$2.3-billion a year more is going into spending.

## I. The Turn Comes

You get the same story if you forget about the statistics and talk to retailers. This week, **BUSINESS WEEK** reporters checked with dealers and store managers in key cities all over the country. For the first time in nearly 18 months, they found most of them happy.

In Texas, a department store manager said gleefully, "This is it." In New England, the president of two big stores said, "We are conscious of a persistently better tone." It added up to the same thing. Almost to a man, the retailers think that the turn has come.

• **Strong and Weak**—Sometimes one line of merchandise is leading the parade, sometimes another. In Los Angeles soft goods, housewares, and furniture are doing best; major appliances are still slow. In Portland, Minneapolis, and Chicago, refrigerators are doing fine. Philadelphia and St. Louis are rejoicing over the way summer clothing is moving out. Television has perked up nicely in some spots and stayed dead as a mackerel in others.

All in all, retailers say that sales in the past month or so have been running anywhere from 6% to 10% above a year ago. And they hope to do even better in the rest of the year. The only major exception that the **BUSINESS WEEK** survey turned up is San Francisco; it's even with last year, but sees no sign of a real pickup.

The steel strike is the one thing that really worries the retailers. They are afraid that they won't be able to get the heavy appliances now that they finally have a market for them.

Automobile dealers already are tearing their hair. The strike has hit them hard. Most of them have more customers than cars—for the first time since the years just after World War II. They are starting waiting lists again—and praying that the customers won't wander off before Detroit finally gets the steel for more cars.

• **What Happened?**—What made the consumers change their minds and start buying again?

The easy answer is that the consumer—like the shad and the lemming—is governed by his own inscrutable laws. He is, and always will be, a wild card in the forecaster's deck.

In a lot of ways that is the only answer that the experts can give. But you can at least see several things that started the lemmings jumping over the cash registers this summer:

• The Federal Reserve Board lifted its controls on consumer credit, and Congress later abolished them entirely. This didn't start a stampede of buying

on a nothing-down basis, but it did bring in a lot of the marginal customers.

• After sitting tight for a year and a half, consumers were beginning to run through the inventories they had built up in the post-Korea buying sprees. They had also paid off some of their bills and banked some sizable savings.

• Incomes have been rising steadily.

• Prices have come down in a lot of lines.

• Stores have been selling hard, putting more and more push behind their efforts to move the goods.

No single reason is important enough to account for the turnaround all by itself. But taken as a package, they also promise that it will continue.

## II. What It Means

Whatever the reasons, the pickup in retail sales is a good omen for business in the rest of 1952. It means that manufacturers can count on a strong consumer market to back up the boom in capital goods.

There's even a chance that the turnaround in consumer buying may start another spurt of inflation. Retailers have been cutting inventories grimly ever since the slowdown started early in 1951. They've now brought stocks

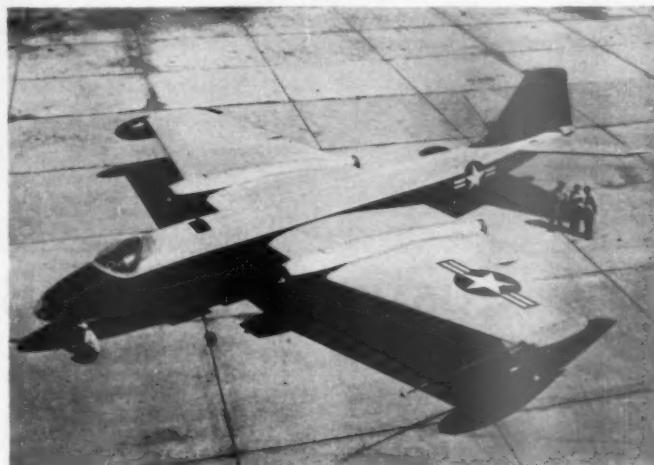
down 13% under the peak, and most of them consider that a "comfortable" level. But what is comfortable when sales are slow isn't anywhere near enough when sales snap up.

Manufacturers still have all the inventory they want and a little more, but the steel strike is making a real dent in new production of hard goods. If consumer demand keeps on rising, the stage is set for a scramble in a lot of lines.

• **Next Year**—To most economists, though, the important thing about the rise in consumer expenditures is not what it will do in the last half of 1952 but what it means for 1953.

If consumer spending keeps on climbing, it will put a prop under U.S. business at a time when some sort of prop is likely to be needed badly. Capital spending—one of the mainstays of the boom—is due to turn down next year. It may already be passing its peak (BW—Jul. 5 '52, p29). And furthermore, defense spending is scheduled to level out in 1953.

This means that after the turn of the year, the whole economy will be leaning on consumer spending more heavily than it has at any time since early 1950. Whether business goes up or down then will probably depend more than anything else on which way the consumer is going.



## "Naturalizing" a British Bomber

The U.S. Air Force has a new member—the Canberra, an RAF light bomber. The plane, pictured here, set an east-west trans-Atlantic record last summer when it flew from Northern Ireland to Newfoundland in 4 hr., 19 min.

With its British insignia replaced by the USAF star, the erstwhile Canberra is now

undergoing extensive tests by the Glenn L. Martin Co., Baltimore. Martin is also building an undisclosed number of night intruder planes, with essentially the same external design as the Canberra. The American version will be powered by two Wright J-65 Sapphire engines, instead of the Rolls Royce Avons of the Canberra.



DENVER'S W. D. Pyle (left), president of Colorado Television Corp., and Eugene O'Fallon (right), president of Eugene P. O'Fallon, Inc., were two of the first 18 applicants to receive permits to operate new TV stations ...

## FCC Speeds Up TV Permits

**Nationwide television made strides last week as Federal Communications Commission—weeks ahead of schedule—handed out permits for stations in 11 TV-less cities.**

New stations may crash the lucrative television broadcasting business a lot sooner than they had expected. Two weeks after the Federal Communications Commission began processing applications, it gave the go-ahead to 18 applicants for new TV stations in 11 cities which up to this time have had no local stations. The commission also ordered hearings on 64 applicants for 27 channels in 11 cities.

The permits went to Denver, Colo.; Portland, Ore.; Springfield-Holyoke, Mass.; Youngstown, Ohio; Bridgeport, Conn.; Flint, Mich.; New Britain, Conn.; New Bedford, Mass.; York, Pa.; Spokane, Wash.; and Austin, Tex. All the stations, with two exceptions, are in the ultra high frequency (UHF) channels; all the permits were issued because there was only one applicant for the particular channel in the particular town.

**The Winners**—The two exceptions went to Denver, the city with the highest priority on FCC's hearings list, and home of Sen. Edwin C. Johnson. In view of early indications that there would be a mad scramble for the very high frequency (VHF) stations (BW—May 3 '52, p73), Washington is still wondering why the city didn't come up with more applicants for those two stations. Eugene P. O'Fallon, Inc., walked off with Channel 2, and Colorado Television Corp. got Channel 9.

Empire Coil Co. of New Rochelle, N. Y., which had also applied for

Channel 9, at the last minute switched to—and was awarded—UHF Channel 26, which up to that time had gone begging.

Besides these three applicants who now have their permits, there were two applicants for Channel 4, and two for Channel 7. Hearings will be held to determine who gets these channels.

**No Competition**—Just what happened to the other contenders for Channels 2 and 9 is anybody's guess. Under FCC's rules, an applicant can apply for one station only. If he loses out on that station, he's out of the field entirely. Apparently, in the case of Channel 2, contestants decided that Eugene O'Fallon was too well entrenched; it would be foolhardy to try to fight it out at the hearings. On the day the commission acted, Knox La Rue—owner of three California radio stations—applied for Channel 2. But since FCC doesn't have to take account of any such actions occurring 24 hours before it makes a decision, La Rue's application didn't count.

Eugene O'Fallon, who heads the company of the same name, has been getting ready for television ever since FCC's freeze in 1948. Owner of radio station KFEL, the company has been operating a TV workshop for two years, and has erected a building for its transmitter on Lookout Mountain. O'Fallon proposes to spend \$374,000 on construction facilities.

Colorado Television Corp., winner

of Channel 9, also is all set to go. Company president W. D. Pyle and secretary-treasurer T. C. Ekrem are the principal owners of radio station KVOD, which is Denver's American Broadcasting Co. outlet. Colorado Television has a site on Lookout Mountain, and has its equipment on order. The company had strong competition for the channel up until the very last minute before the hearings, when Empire Coil Co.—a TV parts maker—suddenly decided to take UHF Channel 26.

**• Prefers UHF**—Empire, which has been operating a VHF station in Cleveland since 1949, may have reasoned that it wasn't likely to win out against local competition. However, officials at Empire claim that the switch to UHF was the result of long-range thinking. In a couple of years, says Empire, UHF will be far ahead of VHF. There's less interference, fewer "ghosts." Also, Empire got the channel immediately, without having to wait for hearings. That gives Empire a jump on competitors. Empire also was awarded UHF Channel 27 in Portland, Ore.

Experts note that Empire isn't the only one to prefer UHF. Of the 500 applications filed so far, 200 are for the new UHF channels. And in Philadelphia—which already has three VHF stations—the competition is hot for every UHF channel.

Applications got off to a slow start, but flooded FCC just before the July 1 deadline, when hearings were scheduled to begin. Apparently many would-be telecasters held off to see how the competition lined up before they gam-bled on any one station.

**• Production-Sales Boom**—FCC has undoubtedly heated up the race of the applicants to get on the air first, especially in towns like Denver—where the field is wide open. In the case of UHF stations—which require different type equipment—the apparent eagerness of the would-be broadcasters is acting as a spur on the set makers to get out receivers and adapters that will bring in the new frequencies.

Set sales are already booming in many TV-less areas, and are bound to be stepped up in towns that are in line for new stations. Estimates of future sales for Denver, which serves an area of about half a million, run to around 150,000 sets. Figured at a minimum of \$200 per set, that means \$30-million in retail sales of sets.

While FCC has been concentrating on uncontested applications so far, new stations for other cities may not be too far off. The commission has \$300,000 from Congress for lawyers and examiners to speed up hearings on applications, and the signs are that pressure will be put on FCC to rush them through.



## Ike's Problem: To Swing

Dwight D. Eisenhower's big job now, as the Presidential nominee of the Republican Party, is to bind up intra-party wounds—even before leveling any blows at the Democrats.

Though the nomination fight at Chicago last week was over quickly, a large—and powerful—section of the GOP went away with bitter feelings. Eisenhower needs these politicians, not only to present a reasonably united party to the country, but to give him party organization.

When Wendell Willkie saw fit to ignore Taft men in 1940, depending on excited but unskilled amateurs for his managers, he cut his own throat. Like

Willkie, Eisenhower's chief argument at Chicago was that he could win the independent vote. But the independent vote isn't enough to elect a president. It has to be backed up by the full strength of the regular party.

- **Common Ground**—As far as domestic policies go, Eisenhower should have no trouble finding common ground with the GOP leaders. The party's 1952 platform is no more conservative than Eisenhower's basic feelings and beliefs.

But the problem he will have in carrying a Republican program to the country puts him in an awkward spot. He must keep his present supporters—who include the majority of business-

men—convinced that Eisenhower is the change needed in Washington. At the same time, he will have to tell the farmer that the Republican platform's farm-price-support plank means a specific parity guarantee. And he will have to specify for the worker just what amendments he would make in the Taft-Hartley Act.

The one bridge Eisenhower will have to bring the GOP regular and the independent vote together will be the promise to throw out the weary men in Washington, to punish corruption and eliminate waste.

- **Midwest the Key**—Bring them together he must—if the Republican cam-



## Taft's Midwest

aign is to get anywhere. Taft's forces must be placated, not merely to show that Ike is a swell fellow, but because Taft support is essential to swing the Midwest and West. These areas were the key to the election of 1948, and are likely to be again this year.

Eisenhower reflected this when he chose Michigan's Arthur Summerfield to be GOP National Chairman. Though Summerfield swung Michigan from Taft to Ike at Chicago, he's still highly respected in the Midwest.

• **History Lesson**—A look at the votes for Truman and Dewey in 1948 shows how this election might well turn on the midwest vote. Truman won every

Middle Western and Mountain state except Kansas, Nebraska, Indiana, Michigan, and the Dakotas. Dewey won every state in the east except Massachusetts and Rhode Island. And the South's States' Rights Party took four states from Truman there.

Still, Truman won 303 electoral votes to Dewey's 189. And 144 of Truman's total came from between the Alleghenies and the Rockies, between the Mason-Dixon Line and the Canadian border.

• **Outside Strength**—Eisenhower will be strongest in the East this fall. That's where the bulk of his convention strength came from, and it's the geo-

graphical area that agrees with Ike's views on foreign policy.

The general is also strong in the South. In the West, Ike probably can give the Democrats a run for their money, too. His running mate is California's Sen. Richard Nixon, and Eisenhower had important convention support from such popular men as Gov. Arthur B. Langlie of Washington and Sen. Wayne Morse of Oregon.

• **Democratic Strongpoints**—But even after giving Ike a better-than-even break all around, you still come back to the farmer in Iowa and the worker in Ohio and Michigan as the citizens who can turn this election.

The Democrats this time can hardly do worse than they did in 1948 in the East, even with Senators Russell or Kerr as their candidate.

In the South, even Averell Harriman would probably lose no more than the four states that the States' Rights candidate, Gov. Strom Thurmond, took from Truman in 1948.

Democrats have pulling power in the West, too. Nixon should not be counted on to do much better than Gov. Warren in putting the West in the Republican column.

• **Deep Wounds**—Eisenhower's friendly gestures to the Taft people aren't enough to bring them whooping enthusiastically back into the fold. Chicago left some searing scars. Moreover, die-hard Taft men have an intense dislike for Gov. Dewey and shudder to think how an Eisenhower victory in November would up-root the Old Guard from party leadership. The new rules voted at Chicago already weaken the old leaders by adding to the National Committee those chairmen whose states deliver majorities to the Republican ticket.

• **Healing Process**—GOP Chairman Summerfield is already applying balm. His first move was to make a bid to Taft's floor manager, Tom Coleman of Wisconsin, to work for the ticket this fall.

Eisenhower has been working, too. He gave a pep talk to Republican congressmen last Saturday and emphasized he would work for the ticket all down the line. This sat well with a lot of members who accuse Dewey of forsaking them and the 80th Congress in 1948.

• **Congressmen Count**—But how, say the pessimists, can Sen. William E. Jenner of Indiana run happily with Eisenhower? Jenner's votes in Congress opposed aid to Europe, NATO, Universal Military Service. And as political leader in Indiana, he stands to lose strength if Ike's New Guard keeps control of the party machinery.

Eisenhower faces this same problem in states other than Indiana. Taft men are running for reelection to the Senate

in Nebraska, Missouri, Montana, Nevada, Ohio, Utah, and Wisconsin. House members from this area are the nucleus of Congressional opposition to Administration foreign policy and the views of Eisenhower's eastern supporters.

• **Personality Plus**—Eisenhower's strong personal appeal can offset even stubborn sulking on the part of Taft men if he goes into the Midwest soon enough and deeply enough. This is the thinking behind a tentative plan for him to make a "whistle stop" tour even before beginning the major campaign after Labor Day.

But after courting Republican leaders, Eisenhower still will have the voters to work on. In 1948, most midwestern farmers and workers listened to Dewey's "high level" campaign, compared it to Truman's Fair Deal promises, and voted Democratic.

## GM Stock Cars to Offer Air Conditioner in '53

Heat-raddled motorists in the Southwest for years have been cranking their car windows shut and setting an open box of dry ice on the back seat. They called it air conditioning.

More recently, big, expensive, custom-built air conditioning sets have been made for big, expensive cars. Fitted specially into stock models, they were generally huge and cumbersome, filling the whole luggage compartment. Other types had unsightly outboard attachments.

This week, General Motors Corp. announced that the air conditioner had finally become standard automobile equipment. It will be available—at the buyer's option—on the 1953 models of Cadillacs and Oldsmobiles.

• **Scaled Down**—Probably the greatest advance marked by the GM development is its size. The rotary compressor is mounted under the hood, at no great cost in space. The refrigeration unit, which uses nontoxic Freon, fits on a shelf in the luggage compartment. But the regular storage space is virtually unimpaired. The basic principle of the air conditioner is the same as that used in railroad cars and offices.

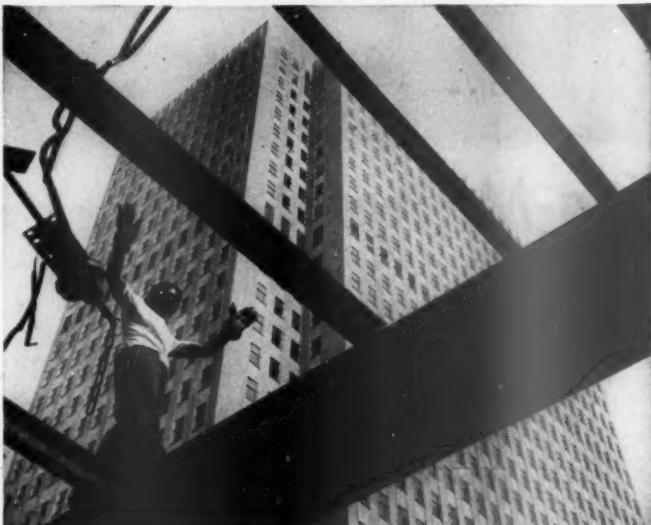
GM says the air conditioner has stood up stoutly under tests in southern Texas, and at the corporation's proving ground at Phoenix, Ariz. It claims that a car which had been sitting in the sun can be brought to reasonable temperature after driving about six blocks.

The unit is controlled by a dashboard switch. A thermostat can be set at any desired temperature. GM test drivers claim they were able to drive in perfect comfort through outside temperatures of up to 110°F.



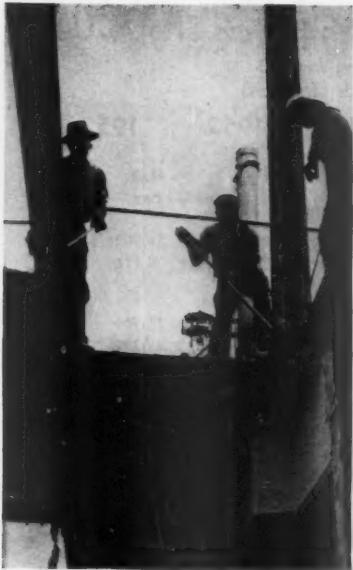
**WORKMEN DISMANTLE**

Pittsburgh's Carnegie Building, built to promote use of steel-frame.



**MASSIVE SKELETON**

shows conservatism of builders in contrast to striking new Mellon-Steel Building across the street.



**MASONRY** has to be knocked off so scrap can be sold.



**BEAMS** are so heavy it took six men to move this chunk, as . . .

## Steel Showpiece Comes Down

One of the country's first, and most massive, steel-frame office buildings is being demolished. A noted Pittsburgh landmark, the Carnegie Building, housed the headquarters of U.S. Steel until a few months ago when Big Steel moved bag and baggage across the street into the new Mellon-Steel Building.

• **Cut Short**—The Carnegie structure, built so ruggedly it is said it would have lasted 1,000 years, would challenge the wrath of an A-bomb.

When the frame went up 59 years ago, the use of steel in an office building was a very new idea. In fact, Carnegie, one of the world's most indefatigable steel merchandisers, is said to have built it in part as an advertisement of what steel could do.

A story, which U. S. Steel describes as legend, says the bare frame stood idle for a year to demonstrate the efficiency of the new type of construction. It was supposedly hung with weights and pulleys to distort the frame, so potential structural steel customers could see how it would go back in shape when the tension was relaxed.

• **Better to Be Sure**—The wrecking contractor ought to make a young fortune out of the steel he can sell: about 70% of it will be sold for structural use. George Doherty, head of the demolition concern, said normally he'd have expected to get 50 tons of steel.

from the penthouse of a building this size. He figured Carnegie would yield around 100 tons. What actually came out amounted to 350 tons. Doherty added that alone he pulled in a cornice block of stone, but it took three men to pull in the steel which supported that stone.

The answer, of course, is that in those days nobody knew much about steel-frame design. They didn't have today's strength-of-materials tables for steel beams. So they made sure by using heavy sections and close spacing. They figured a very healthy safety factor, then multiplied by the telephone number.

• **Stone-by-Stone**—One thing complicates the wrecking job. The Carnegie Building is located right smack in Pittsburgh's dense business section. That means that instead of using a one-ton wrecking ball at the end of a 60-ft. beam, the building must be knocked down literally piece by piece with a 16-lb. sledge hammer at the end of a laborer's arms.

The building, which has belonged to U.S. Steel or its forerunner, Carnegie Steel, ever since it was built between 1892 and 1895, is being demolished to make room for an addition to Kaufmann's, the city's largest department store. Kaufmann's hopes to add \$20-million volume from the new space within five years after it is available.

## Fair Trade Back . . .

. . . with teeth in it, as Truman unexpectedly signs McGuire bill, making prices binding on nonsigners.

In a move that took almost everyone by surprise, President Truman put the teeth back into fair trade by signing the McGuire bill this week.

The bite had been extracted a little more than a year ago by the Supreme Court in its famous Schwengmann decision (BW-May 26 '51, p.25). This declared that the federal Miller-Tydings amendment did not sanction the extension of state fair-trade laws on nonsigners—merchants who did not sign resale price maintenance contracts.

• **Explicit**—Where Miller-Tydings was vague on this point, McGuire could hardly be more explicit. It specifically states that "willfully and knowingly advertising, offering for sale, or selling any commodity at less than the price or prices prescribed in such contracts . . . is actionable at the suit of any person damaged thereby."

There are other points of difference, including the fact that Miller-Tydings was an amendment to the Sherman Antitrust Act, whereas McGuire is an amendment to the Federal Trade Commission Act. The new act took effect the moment that Truman signed it.

In signing, Truman stressed the fair trader's argument that fair trade is a protection for the small merchant against "cutthroat competition." But he admitted that fair trade "also has the effect of removing some competitive forces which otherwise would operate to keep prices down." He thought that "we have not yet found the best solution for the problem this legislation is intended to solve."

• **Pressure**—Why, then, did he sign the bill, particularly in view of his indication that he would veto? Almost everyone looked for a pocket veto (BW-Jul. 12 '52, p.31).

To the fair traders, Truman's act proves the potency of their whirlwind campaign for McGuire. They think that the big congressional majorities in favor of the bill plus tens of thousands of letters generated by druggists' groups did the trick.

Washington has another explanation, however. Observers say that what really did the trick was personal pressure applied by some of Truman's old cronies who were his fellow merchants when he was a haberdasher.

Whatever Truman's reasons, he succeeded in restoring fair trade to just about where it was pre-Schwengmann.

The old antagonists are back at the

old stands. General Electric, within 12 hours, announced that it would restore its fair trade policy on small appliances and that "we'll make a vigorous effort to enforce it again." Macy's expressed its unalterable opposition to this "price-fixing law," but said it would comply.

• **Uncertainties**—Nevertheless, after a year's hiatus and with another new law, things aren't quite the way they used to be. There are some uncertainties to be dealt with.

What will Justice Dept. do about its suits launched since Schwegmann? The betting in Washington is that it will (1) drop the Sunbeam case, which involves vertical price-fixing (now made legal again), but that it will (2) press the McKesson-Robbins case and the one against the Pittsburgh drug wholesalers and retailers. Reason: These latter suits involve changes of horizontal agreements, which are still outlawed under the antitrust laws.

Will the McGuire act close the hole poked in fair trade by the decision in the Wentling case which held that mail order houses are bound by fair trade prices only in the states where they are based (BW-Nov. 17 '51, p50)? The American Fair Trade Council is quoted by the Fairchild Publications as saying that the act "provides no protection for the hometown merchant against mail-order raiders from outside the state."

• **Litigation**—So it looks as though plenty of litigation is bound to follow. Some observers are looking for a rash of suits brought against price-cutters by fair-trading companies as a warning against the practice.

Other constitutional tests may yet arise. Some critics question the constitutionality of the nonsigner clauses. Is it legal for the government to make a contract between two private parties binding on a third party? The Supreme Court didn't dispose of this issue in the Schwegmann case. Sen. Paul A. Douglas raised it once again when he fought against McGuire on the floor of the Senate.

## RFC Copper Loan

After three months of haggling, Reconstruction Finance Corp. this week made its biggest single business loan to date: \$94-million to the San Manuel Copper Corp. of Arizona. The loan—supplemented by more than \$25-million in private funds—will be used to develop the largest untapped copper deposit in North America, located 43 mi. northeast of Tucson.

When San Manuel reaches full production in 1957, it will be one of the nation's largest copper producers. In addition to 140-million lb. of copper a year, the mine will produce 6-million lb. of molybdenum.

## How International Air Subsidies Shape Up

Fiscal years ending June 30  
(Figures in thousands of dollars)

	1951			1952			1953		
	Mail Pay per Ton- Mile	Mail Pay	Mail Subsidy	Mail Pay per Ton- Mile	Mail Pay	Mail Subsidy	Mail Pay per Ton- Mile	Mail Pay	Mail Subsidy
<b>TRANSATLANTIC</b>									
TWA (Int'l. Div.)	\$0.85	\$3,260	\$4,240	\$3,686	\$4,314	\$4,003	\$4,497		
Pan American	0.85	4,391	10,609	4,718	9,282	5,116	8,884		
<b>LATIN AMERICAN</b>									
Pan American	0.59	1,765	5,435	1,918	8,082	1,966	8,034		
Braniif	0.88	101	1,999	247	2,253	312	2,188		
Chi. & Southern	0.88	31	1,572	37	1,818	44	1,811		
Panagra	0.88	360	2,243	421	1,947	472	2,351		
Caribbean Atlantic	1.38	14	248	17	204	19	202		
<b>TRANS PACIFIC</b>									
Pan American	0.67	3,771	7,263	3,082	7,766	3,082	7,766		
Northwest	0.67	1,303	2,997	1,266	3,034	1,266	3,734		
<b>U.S.-ALASKA</b>									
Pan American	0.47	214	792	229	901	172	1,397		
Pacific Northern	0.47	—	—	122	478	104	846		
Alaska Airlines	0.47	—	—	162	638	93	757		

\* Includes operations of American Overseas Airlines Jul. 1, '50—Sep. 25, '50.

Data: Civil Aeronautics Board estimates.

## CAB Divides Pay From Aid

Last October, the Civil Aeronautics Board made a bookkeeping breakdown of just how much actual compensation airlines were getting for carrying domestic airmail and how much was clear subsidy (BW-Oct. 13 '51, p25). Last week, CAB made the same breakdown for U.S.-flag international lines.

This doesn't mean that international airlines will get any more or any less federal money. It does mean that CAB, the airlines—and Congress—now know for the first time what portion of "mail pay" is actually subsidy aid.

• **71% Subsidy**—In a preliminary tally for this fiscal year ended June 30, CAB figures that of a total mail pay to overseas carriers of \$624-million, only \$18-million was for carrying the mail, \$441-million (or 71%) was subsidy.

The basis for the board's breakdown is an estimate of cost per ton-mile of mail haulage for each of the 12 international lines (table). Into these estimates goes the actual cost of carrying the mail plus an amount equal to a return of 8%—after taxes—on the part of the lines' investment used to carry the mail.

The ton-mile rates set by CAB are well below the rate paid by the U.S. to foreign-flag carriers—and by foreign governments to U.S. carriers—for overseas airmail. This rate, set by the Uni-

versal Postal Union, was \$2.86 a ton-mile, has been changed to \$1.91.

• **Telling Rates**—Most significant of the services set by the board is the 85¢ a ton-mile figure set for Trans World Airlines and Pan American World Airways' Atlantic division. Most of U.S. international traffic use the Atlantic routes of these two carriers.

TWA has been claiming for a long time that its international division operates at a lower cost to the taxpayer than Pan Am's Atlantic division, its direct competitor. CAB's breakdown appears to support the point. Pan Am's Atlantic division carries only slightly more mail than TWA-International, yet Pan Am's subsidy is more than twice TWA's.

Pan Am admits the discrepancy, but says it is justified by the difference in route structure. TWA, it says, has a cohesive, narrow route through central Europe to Cairo. But Pan Am has routes, such as those to South Africa and Scandinavia, which it must operate, not to make money, but in the national interest. On these it suffers low-density traffic and high overhead.

• **Not Final**—Total mail-pay-plus-subsidy figures in the table are only estimates—even those for 1951. Permanent rates will be set after hearings before CAB beginning this fall.

# A Word to Management . . .

## About Steel Stocks

Long weeks of strike by steel mill workers has, naturally, piled up a big backlog of unfilled orders—lost tonnage that the mills will be many months making up. Until adequate replacement is possible our stocks will inevitably continue to decline, but here is a quick picture of the situation at Ryerson as these lines are written—7/8/52

**Our stocks of both carbon and alloy steel bars** are quite spotty with larger diameter bars in short supply, the smaller sizes somewhat better. In carbon steel, cold finished bar stocks are better than hot rolled stocks. In alloys, carburizing types are the most plentiful.

**Our stocks of plates and shapes** are low, as these products are among the most widely used for defense purposes. But sheets are in fair supply, especially cold rolled, heavier than 19 gauge, and we can meet most any requirement for welded tubing and for straight chrome stainless. Other products in good supply at Ryerson are: drill rod, tool steel, hydraulic tubing, structural tubing, Inland 4-Way Safety Plate.

**How about Ryerson service?** Our staff of experienced steel specialists is always at your service to give counsel on any

steel problem. You may be surprised at what can be accomplished with their help. For example, we can often suggest practical alternates for steel that's not on hand. And if you always tell us what length or width you are actually using, we may sometimes be able to fill your order from smaller pieces when we could not otherwise supply you. Then too, we are continually adding to our service facilities—you can depend on quick delivery of available steel.

**So during this interim period** continue to call on us for steel. With reasonable restraint on the part of industry and conformance to government regulations, we should be able to take care of most essential requirements. We will replenish our stocks with an increasing variety of types and sizes as rapidly as possible. And you can be sure we'll do our very best to help you whenever you call.

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100 PAGES

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## BUSINESS BRIEFS

**Ford Motor Co.** lost its bid to nose out Chrysler as the No. 2 auto producer. National Production Authority turned down Ford's plea that it rejigger materials allocations to give Ford a bigger share (BW-May 3'52,p36).

**Uncensored newsreels** will be shown by five Ohio movie houses to test the right of the state to O.K. them first. The U. S. Supreme Court rulings that banned censorship of the movies *Pinky* and *The Miracle* spurred the revolt (BW-Jun. 7'52,p36).

**Coal on the instalment plan** is the latest move to pep up anthracite coal sales. Lehigh Navigation Coal Co. has set up a dealer-consumer financing plan which allows customers to buy their winter supply now with no money down and 12 months to pay.

**New speed queen:** The liner United States broke all speed records for trans-Atlantic crossings and brought supremacy of the Atlantic home. East-bound, she bettered the Queen Mary's record by 10 hr., 2 min. (BW-Jul. 12 '52,p36). She sped home in 3 days, 12 hr., and 12 min., averaging 34.51 knots.

**Commuters** in 74 cities and towns along routes of the Eastern Massachusetts Street Railway Co. rode buses to work again this week after settlement of a strike that has disrupted service since Mar. 10. Hundreds of strikers found themselves still out of jobs, though. Many of the 500,000 riders had turned permanently to other transportation.

**Truckers** who travel the New York State highways will have to pay the state weight-distance tax. The Court of Appeals upheld the year-old law. Trucking companies claim the tax is unconstitutional (BW-Mar. 22 '52,p30), will appeal to the U. S. Supreme Court.

**Accidents cost money:** Four more states have joined the swing toward higher rates for auto liability insurance. Delaware, Idaho, Missouri, and Vermont are trying to bring rates in line with the skyrocketing cost of settling accident claims (BW-Jun. 7'52,p129).

**A new plan** to bring an independent aluminum producer into the industry is brewing in Washington. Telford Taylor, head of the Small Defense Plants Administration, has proposed to several aluminum-fabricating companies that they organize their own producing unit. The government would stand by to lend "reasonable" assistance.



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... including Fruehauf's Exclusive Extruded Aluminum Floor.
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# MARKETING

## Popular Opinion:

**The longer you have a TV set, the less you look at it.**

**Children see too much TV.**

**TV is knocking the spots out of radio, movies, magazines, newspapers.**

**The replacement-set market is getting hot.**

## Videotown survey shows:

**Precisely the opposite is true for the family as a whole.**

**They're looking less than they did at first.**

**Only partly true. Radio has come back slightly. Newspapers are unaffected by TV.**

**You shouldn't look for too much for the next few years.**

## NEW STUDY ON "VIDEOTOWN" SHOWS

# What They Really Do With TV

Who makes up the television audience? What are its habits? What has this new medium done to other media?

By and large these questions baffle the television industry. The reason is obvious: TV is so raw and new, and so many unexpected things have happened to it in a few short years, that no one knows much about it. There hasn't been much research into these problems; what there has been is often superficial and/or biased.

• **Videotown**—The danger of taking TV for granted has just been driven home again by a piece of research now being completed by Cunningham & Walsh, the Manhattan advertising agency that handles the Chesterfield account. This so-called Videotown survey—a "census of television and its effects on family life in a typical American town"—should change some popular thinking as well as some industry plans.

Cunningham & Walsh's Videotown surveys are highly regarded in the industry. This is the fifth year that the agency has gone down to New Brunswick, N. J., to make its study of the

TV public's habits. But it is the first year that Cunningham & Walsh has divulged the name of the town. Likewise it's the first year that the agency has been able to make some deductions about significant aspects of TV.

• **Guinea Pig**—Five years ago, when TV was just getting under way, Cunningham & Walsh decided to find out at first hand what was going on in the vigorous and puzzling new medium. It instructed its vice-president in charge of research, Gerald W. Tasker, to get in the field and investigate and develop some significant data.

For his pioneering effort, Tasker decided to concentrate rather than to spread his work across the country, then thinly populated as far as TV families went. He chose New Brunswick, a town of about 40,000 people, 34 miles from Times Square, for several reasons: It is close enough to receive New York's many TV stations clearly, far enough away to be a separate market. New Brunswick has some commuters who go into New York, but it also has some who come into New Brunswick to work. It has industry (Squibb, Johnson & Johnson) and a

university (Rutgers). Tasker remarks, "We couldn't find a town near New York that is more normal, better rounded, or less influenced by New York."

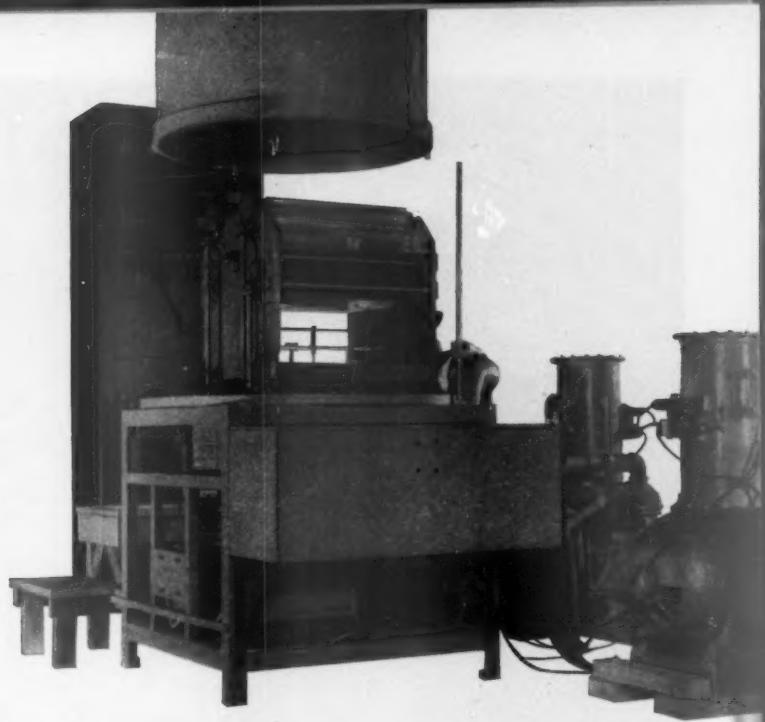
• **House to House**—Tasker's plan was basically simple. He and his staff walked every street in town, spotted the TV sets, interviewed all the owners. Last year, when New Brunswick had 5,500 TV families the job got too big. (The tally is now about 6,400, or 58.5% of all families as of Jan. 1 this year.) So Tasker simplified things by tallying every fifth family on a probability-poll basis. At the same time, he established two permanent panels, one of TV owners and one of non-TV families.

How good is the poll? Obviously it hasn't the scope that a national poll would have. But the cost of a national poll would be prohibitive (the Videotown survey now costs about \$15,000 yearly for the field work). As it is, at least one network research man thinks that the Tasker survey is the most reliable poll of its kind.

Cunningham & Walsh people admit that you can't always project their

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The product is more spectacular than pictures on this page could ever show. Yet the process is not complicated and profit prospects are excellent.

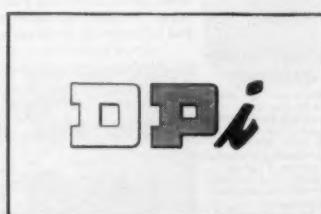
We make the equipment and it works like this:

You degas the surface of a roll of high quality plastic sheeting (Kodak Sheet, for example) by automatically rolling it back and forth many times at high speed under moderate vacuum.

Then you transfer the roll to a machine like the one shown above. The big steel jar comes down and within a few minutes your sheet is under high vacuum. Inside, a set of crucibles, each containing a few ounces of aluminum, flash to white heat. Under the high vacuum, the heat vaporizes the metal to a gas which hits the area of sheeting passing above the crucible and condenses on it as a film a few millionths of an inch thick.

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"... the early birds are also the more avid video fans..."

TV SURVEY starts on p. 38

figures out and get a national total. The reason, they say, is that New Brunswick is a "mature" TV area that has had multiple-station operation for several years. It therefore foreshadows what will happen in other cities after they have had enough time as multiple-station areas.

### I. Viewing Habits

The most interesting result of the Videotown surveys, from a general standpoint is what they show about viewing habits.

Almost everyone you meet tries to tell you that he looks at his TV set much less now that the novelty has worn off. New Brunswick makes a liar out of him.

According to the Videotown surveys, things have worked out just the reverse. TV owners as a whole look at their sets more—not less—than they used to. And the families that have had their sets the longest seem to look the most.

The table below shows (1) the number of hours the average TV family used its set during weekday evenings according to (2) the length of time it has had a TV set:

When set was purchased	Hours set is in use
1951	1952
Pre-1950 .....	19.2
1950 .....	17.3
1951 (3 mos.) .....	17.0
May '51 to Apr. '52 .....	17.8

This points to some interesting conclusions.

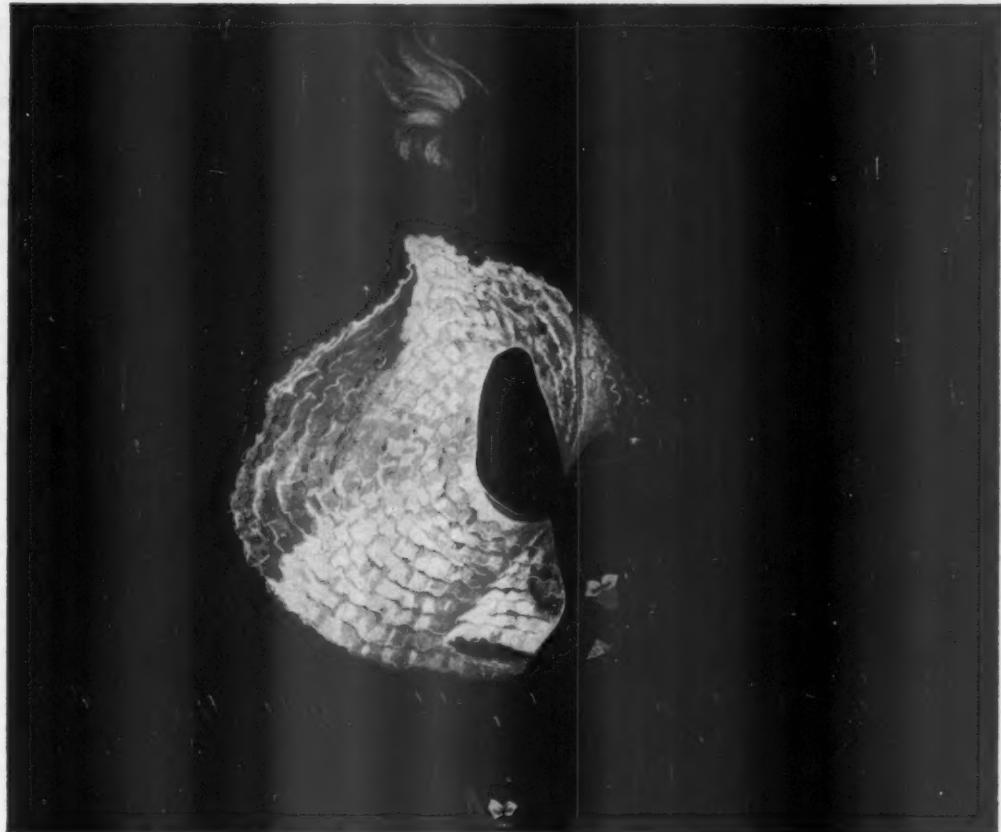
For one thing, Tasker and his people point out that the families that first bought television sets were, by definition, more interested in the new medium than the people who waited to buy their sets.

For another thing, the early fans were also apt to be the ones with the larger families.

• **Better Shows—Improved programming** is another reason why TV owners in general seem to be looking at their sets slightly more than they used to, according to Tasker and others in the field. There are more and better shows than there used to be.

Tasker has uncovered an interesting trend in children's TV-viewing habits: Tots appear to be looking at TV slightly less than they used to—a trend that should gladden the hearts of parent-teacher associations and parents in general. Weekday evening hours spent in front of TV sets by children under 10 years old dropped slightly from 9.1 hours in 1950 to 8.8 in 1951.

Reasons suggested for this are varied. Tasker thinks children "are taking as



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"... People can't watch TV  
and do anything else . . ."

TV SURVEY starts on p. 38

much TV now as they can take." Others think that the novelty has worn off for a lot of children. Still others ascribe this leveling-off—which is all you can really call it—to TV's integration into the home.

### II. Effect On Other Media

There's no denying that TV has jolted magazines, movies, and radio. You simply can't take as much time out for video as people do and still keep up all your other pastimes.

But the interesting thing pinned down by Cunningham & Walsh is that TV's effect on other media is spotty:

**Magazines.** There's no doubt about the trend here. Magazine reading by adults in evening hours in houses where TV sets were purchased in 1951 was cut in half. That figure in turn was halved in 1952.

Whether this trend will continue, Tasker doesn't know. Only future surveys will show whether or not the severity of this drop will be eased later.

Magazine reading has not been affected across the board, of course. The major impact—judging from circulation figures—seems to have been on the so-called general monthlies and on other magazines that chiefly purvey amusement (BW-Jul.12'52,p.38).

**Movies.** TV's effect on movies can be judged from these figures: Where people bought sets in 1951, movie attendance during week nights dropped off 77% that year, and lost 60% of the remainder the second year.

This exaggerates TV's effect on movie-going somewhat because it takes into account only weekday night attendance. It's weekend nights that have always pulled the big houses.

**Radio.** The bare figures here show a slightly different story. Weekday night radio listening by people who bought sets in 1951 plummeted 88% in 1951. But it rose 15% in 1952.

Tasker's researchers noted that this slight comeback for radio occurred mainly in the early and late evening. They lay it mainly to increased interest in news broadcasts.

It also appears that TV is not making appreciable inroads so far into daytime radio up through the later afternoon. TV viewing picks up about 4 p.m., when the kids come home from school. Cunningham & Walsh found that during morning hours in New Brunswick three times as many people were listening to radio as were viewing TV.

The reason seems fairly obvious:

People can't watch TV and do much of anything else.

**Newspapers.** This is one medium that doesn't seem to have been affected by TV. The Videotown survey shows that TV families actually read considerably more newspapers than the year before. It would seem that newspaper reading follows the trend of the news and that it is quite independent of TV viewing habits.

### III. Replacement-Set Market

The part of the survey that will most interest—and depress—the trade is the data Cunningham & Walsh turned up on the replacement market for TV sets. Putting it briefly: The replacement market is simply nowhere near as big as manufacturers had figured it.

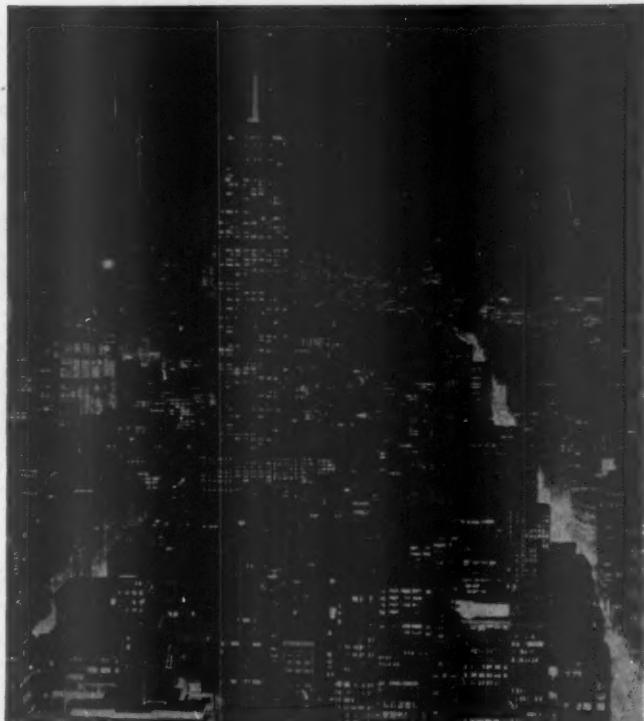
True, it has gained percentagewise this year over last. About 16% of all sets sold in New Brunswick in 1951 were bought by people who traded in sets, while 22% of the sales this year will be in that category. But the percentages are deceptive. Total sales this year (new and replacement) are running 16% below last year, which was, in turn, one-third under 1950.

Cunningham & Walsh found that a little under 5% of present set owners said they intended to buy a new set this year. Discounting those who probably won't go through with their intention, Tasker's staff comes up with a figure of 3½% as the size of the replacement market among present owners. This is despite the fact that some 40% still have 10-, 11- and 12-in. sets.

**• Quick Maturing—What's wrong?** In general the problem is simply that TV reached maturity in such a surprisingly short time. It took TV only about six years to reach a point of saturation that other appliances reached only after two decades or more. It will take several years for these comparatively new sets to begin to wear out.

A second thing right now is the fact that most people laid out so much money so recently for their present sets. Tasker found that they aren't in a buying mood. He also found that they are fairly well satisfied with the performance of their present sets and are apathetic towards new developments such as color television.

Thus it looks as though manufacturers are going to have pretty lean pickings until new stations get on the air and until a normal replacement market opens up. As for the second-set market, Tasker thinks manufacturers might as well forget that. Only 2% of New Brunswick homes now have two sets. Most of the remaining 98% say that if they were given another set they'd turn it in for cash. They say they simply haven't room in the house for another TV set.



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Lord Elgin Service Award Watch 4902A. Case engraving with special company identification, including trade mark reproduction, available.

## Salesmen Try Courtesy

Bloomingdale's department store hopes that its new program to jack up employee courtesy will help to separate customers from their money less painfully.

Back in 1939, retailers were strumming on the "service with a smile" motif. As a result, customers made many an unscheduled purchase. Often as not a motorist who stopped at a service station for air in his tires drove off with four brand-new tires.

In 1952 it's painfully apparent that many retailers have forgotten the popular tune that kept the cash registers ringing up sales in 1939. Clerks aren't making sales—or at least not half enough to satisfy the manufacturer, the distributor, and often even the customer. The customer frequently feels that she has to force the sale.

Retailers have tended to blame their woes on customers who won't buy, on costs that won't stay down, on profits that just barely creep through. Net earnings for department stores last year were 2.3% of net sales, according to Harvard's Malcolm McNair (BW-Jun.7'52, p46). But now there's a growing conviction that they haven't paid enough attention to a vital link in the manufacturer-to-consumer chain: the man or woman at the retail counter.

• **Campaign for Courtesy**—One store that is working on that particular link right now is Bloomingdale Bros., big New York department store. This week it is midway through an intensive program to improve its sales peoples' rating on one important point: the courtesy they show to the store's customers.

Bloomingdale's has attacked its problem the same way a teacher in a progressive school goes at her job; it's out to get the sales people to do their own thinking about the importance of courtesy.

James P. Mitchell, vice-president, thinks that the apathy of sales people toward making a sale is a countrywide complaint. But on simple courtesy—or lack of it—New York takes the cake.

• **No Salary Gripe**—It is not, he feels, a question of pay. Bloomingdale's 2,500-odd employees average \$62 a week. Bureau of Labor Statistics' figures for January, 1952, put the national weekly wage for all manufacturing at \$65.60. A recent study put the bookkeeper's high at \$55.50, the secretary's high at \$65 (BW-Jun.14'52, p154).

Furthermore, Mitchell says, close to a third of Bloomingdale's employees are women; many are not heads of families, they are simply supplementary earners.

• **Bloomingdale's Plan**—Bloomingdale is dividing its entire personnel into

groups of 20 people. Each group has two meetings each lasting an hour.

In the first session, the sales people fill out questionnaires that ask for the following information: (1) four instances where the employees have experienced either courteous or discourteous treatment—in a restaurant, drug store, grocery, or what not; (2) the extent of courtesy they have observed at Bloomingdale's—on such scores as unwillingness to show merchandise, scorning low-priced orders, using high-pressure selling; (3) a self-evaluation on the same counts; and, finally, (4) their appraisal of what courtesy means to Bloomingdale's in dollars and cents.

One member of each group is picked to go out "comparison shopping" to see how other stores rate on courtesy.

At the second session, the group is asked once again to rate Bloomingdale's on courtesy, on the same points they covered the first time. Then the meeting is thrown open for a general bull session on their findings.

• **Customer Reaction**—When the entire store personnel has had a crack at the meetings, probably late in August, the management plans to write a letter to its charge account customers. It will explain what it's trying to do, ask its customers to help. With the letter it will send cards. The customers are asked, when they have met with some particular courtesy from a Bloomingdale employee, to give that employee one of these cards. The employee who gets such a card will get some sort of recognition.

• **Employees Pitch In**—In the main, says Mitchell, the employees have taken to the program. There have been some cynics, but most of them have gone into the project with a good deal of zest. "They're all talking about it," say the store's training girls, who conduct the group discussions.

The comparison-shopping device has proved a good one. Bloomingdale personnel are likely to come back in a highly critical state of mind, with a renewed fervor for the old Bloomingdale tie. And the fact that the second meeting is always the hot one testifies to the interest the program gets. "That's when they begin beating their breasts," says Mitchell.

"It's apparent the sales people get the point. Since they work on a commission basis, they know they benefit from the payoff.

In fact, Mitchell feels, the retailing

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Skilsaw, Inc., wanted the best for the brand-new 1" Skil Grinder you see above. The motor, for example, had to be lightweight, compact, powerful—and capable of running for long periods at 36,000 RPM! As they have for the past 25 years, Skilsaw gave Robbins & Myers the motor space limitations . . . told us to take it from there.

600 revolutions per second is going some! To withstand the high centrifugal force built up, we designed a special motor, dynamically balanced, with a diamond-turned commutator and special windings that would stay in place. Result? During a test which has run 881 hours to date, the armature has traveled about 90,000 miles at 120 m.p.h. without a single breakdown! And to top it off, this Skil Grinder has twice as much power as other grinders of similar weight.

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driven products—are as good as their power source. Leading manufacturers of such equipment rely on R & M for the best in motors. We've spent years accumulating engineering skills, while producing millions of complete motors and matched motor parts. If one of the many standard R & M motors doesn't solve your problem, we have the ability, as demonstrated above, to custom-design motors or motor parts that will meet your exact requirements . . . quickly and economically.

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field is the easiest one to connect the organization's welfare with its employees. Bloomingdale's has tried this tack, too. A couple of years ago Mitchell himself met all the employees in discussion groups. The point he made was that when the store prospers, its employees prosper. When they have examples such as the closing of Loeser's before their eyes (BW-Feb. 16 '52, p24), the point jumps home.

• **"Overselling" Scored**—As to whether there's a point beyond which a customer doesn't want to be sold, Mitchell feels that depends on the department. A man buying a piece of furniture wants all the help he can get. A woman in the housewares department may just want to browse. In any case, however, high-pressure selling is ranked as a courtesy.

However, Mitchell stresses, more courtesy isn't going to be a cure-all for retailers' ills. It is just one approach to the problem.

### MARKETING BRIEFS

Gamble-Skogmo has had a cease-and-desist order from FTC in the exclusive-dealing case against the retail chain pending since 1948 (BW-Jul. 31 '48, p54). FTC has ordered Gamble-Skogmo to stop negotiating exclusive agreements with some 1,700-odd dealers to whom it sells merchandise. FTC also forbids the company to use "coercive methods to enforce these agreements." Gamble-Skogmo is appealing.

Variety chains increased their sales to \$2.2-billion last year, up 7.6% over the year before, says Harvard Business School in its annual report. That beats all retail sales, which were up about 5% over the year previous. But the variety chains' net profits were \$145.6-million, off nearly 6% from 1950.

Beer battle in the New York market (BW-Apr. 19 '52, p147) continues hot and heavy. Anheuser-Busch will increase the output of its year-old Newark (N. J.) brewery from 1.2-million bbl. annual capacity to 1.6-million bbl. And Liebmann Breweries will increase newspaper advertising for its Rheingold beer enough to make Liebmann the largest national advertiser in the New York market, the twenty-third among all advertisers in size on a national basis.

Parking problems in retail areas are taken up in a brochure published jointly by National Retail Dry Goods Assn. and the Automotive Safety Foundation. "Parking: How It Is Financed" covers off-street parking solutions achieved in 27 communities.



## For Brighter Mondays... ATLAS CHEMICALS

Inside and outside the home—wherever washing and dry cleaning are to be done—Atlas chemicals help chase washday "blues" on Mondays and every day.

Atlas Renex®, a detergent booster, gives extra washing power and all-purpose usability to products bought by housewives and laundrymen. Renex is low in cost . . . works equally well in any water — hot or cold . . . hard or soft.

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Helping to clean the Nation's clothes is just one of many jobs performed by Atlas chemicals. They are also widely used in cosmetics . . . pharmaceuticals . . . textiles . . . paints . . . plastics . . . tobacco products . . . many others. For complete—and profitable—details on how Atlas chemicals can work for you, contact Atlas today.



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Polyols • Surface Active Agents  
Industrial Explosives • Industrial Finishes  
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**WOOL** is traded in Summer Street offices that haven't changed since dealers' fathers ran business at turn of century.



**IMPORTED** wool from all over the world eventually lands in Boston. Port handles most of wool used in U. S., biggest consuming nation.



**GRADED** by nimble fingers, wool is readied to be . . .



**SOLD** by salesman whose sample rolls are street trademark in . . .

## Boston: Hub of World's Wool

High over Boston's Church Green a huge billboard greets the hundreds of tourists who daily enter the city through South Station. The slogan reads: "Boston . . . Hub of the World's Wool."

Ten to 15 years ago, this bit of uncharacteristically ostentatious promotion might have been disputed—by London, Buenos Aires, or Sydney, Australia. Today there is no doubt of it; Boston is the capital of the world's wool trade. Through its docks and railyards and in its warehouses is handled, bought, and sold more than 70% of all the wool consumed in the U.S. And the U.S. is now far and away the largest wool consuming nation in the world.

• **Speaks for Itself**—You need only step out of South Station to the corner of Atlantic Avenue and Summer Street and take a look around. Here, running half the length of Summer Street, is what is sometimes called "the Grand Canyon of Wool"—a half-mile corridor between gaunt, gray loft buildings, split in the middle by a draw-bridge over Fort Point Channel.

Everything on Summer Street says Wool. It's written there in the hundreds of traditional gold-lettered, company signs that slab the fronts and sides of the loft buildings. Bales of it rumble by on the bent backs of trailer trucks enroute from dock to warehouse or from warehouse to mill. Tufts of it tumble in the street, blown from the sample rolls that wool salesmen carry on their ceaseless rounds of customers.

• **Back to Antiquity**—Follow one of these salesmen back to his office. If he's attached to one of the few big, old-line concerns on the street, he'll walk right into the office on ground-level; the top five or six stories of the building will all be loft space—at this time of year, crammed to the roof with

greasy fleeces. If he belongs to one of the many smaller, probably younger firms, he'll get aboard a creaky, birdcage elevator and rise past floors of other, smaller offices to his own.

Whichever it is, the office he enters will probably hark to antiquity—the dark-stained paneling, the waist-high office gate, and roll-top desk.

Around the walls are maps of Australia, New Zealand, South Africa, South America, the wool-producing areas of the U.S.—where this business all starts—and pictures of high-collared, mustachioed founders of the firm.

• **Little Change**—That's the way Summer Street has looked since the turn of the century. The only major physical change since then is in the number of firms doing business in wool. Ten prosperous war and post-war years, plus a recent trend toward more brokerage houses, has swelled the number of firms on the street almost two-fold.

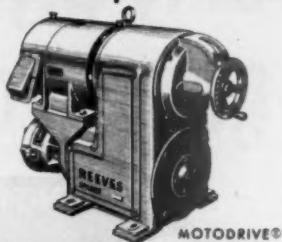
Membership in the Boston Wool Trade Assn. today stands at about 250 firms. Twenty years ago there were less than 150. In all, 384 corporations, partnerships, and individuals comprise the complete Boston wool trade.

• **One and All**—Broadly speaking, all of these companies are engaged in the same basic job: getting the wool from the producer to the consumer—buying it from a farmer in Ohio or Oregon, a rancher in Argentina or Afghanistan, and selling it to a worsted mill in Maine or a woolen mill in Tennessee.

### I. Why a Wool Mart?

The nature of wool demands this middle-man function and requires that it be concentrated in a single mart, for two main reasons: (1) Centers of wool production are far removed from centers of consumption; (2) Wool is actu-

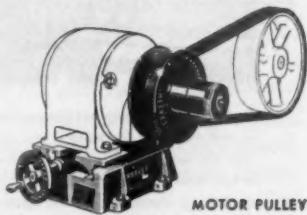
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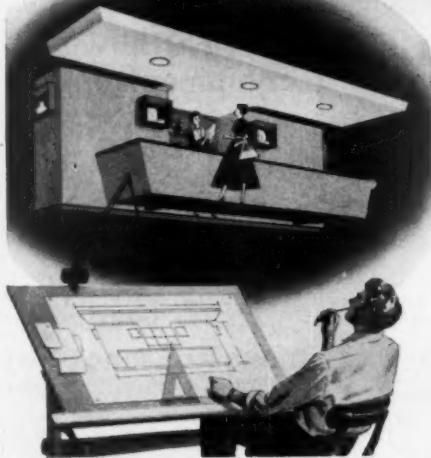
**MOTOR PULLEY:** converts any standard, constant-speed motor to variable speed drive. Speed ratios to 4 to 1; sizes to 10 hp.

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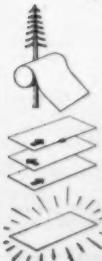
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into thin wood sheets which are inseparably cross-laminated

to form large, light panels having beauty and great strength

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AND INDUSTRIAL MATERIAL

# 6



1 Attractive Appearance



2 Workability



3 Cross Laminated Strength



4 Large Panel Size



5 Tested Quality



6 Light Weight

ally not one, but roughly 6,000 commodities—all highly volatile price-wise.

• **Frontier Crop—Wool** is a frontier crop. It has always been forced to the outskirts as sheep-grazing lands became more valuable for cattle raising or grains. Until World War II, the U.S. grew the bulk of the wool it consumed. Now it imports more than twice as much wool as it grows—mainly from Australia, South Africa, and South America.

Long supply lines take time. Mills don't have time. Long supply lines take money. Most mills can't afford to tie up capital in inventory that's coming to them by freighter from 15,000 mi. away—especially in an inventory subject to wild price fluctuations.

• **Near at Hand**—Finally, no mill can afford to search the wide world for the best deal on any one of some 6,000 varieties of wool it may need at the moment. Instead, it turns to a central market close by where there are specialists who keep all the 6,000 varieties in stock, or who know where they can get them fast, and who are in lively competition with each other to offer mills the most attractive price.

## II. How It Works

Within this broad trade service of transfer from producers to consumer, there is a three-way breakdown of function: dealer, broker, and topmaker.

It takes a short course in the wool business to understand how these middlemen work together. Sheep clothe themselves anyway they know how. They may grow long fibers (or staples) of wool or short ones, thick or thin, all on the same fleece.

Somewhere along the line before it can be spun into yarn, this wool must be graded and sorted. It must also be washed, or scoured, to get rid of grease and dirt, carded to clean out burrs and twigs, and, if it's long fiber, combed into long, inch-thick tresses which are wound into 9-lb. bundles called tops (BW—Jun. 23' 51, p92).

• **Too Big to Handle**—In the early days, woolen and worsted mills did all this preparatory work themselves. They counted on a dealer only. His function was just to have greasy wool on hand in quantity and to separate or grade fleeces roughly, long staple from short.

As mills got bigger in size and volume, this preparatory work became burdensome and expensive. Sensing a demand, enterprisers set up independent mills to sort, scour, card, and comb wools on a commission basis. Today there is hardly a truly vertical mill left. Almost all of them buy prepared tops or carded woolens ready to spin. The tops they buy from topmakers.

• **Money in It**—There's good money in topmaking; hence the rapid increase

★

**"There was the feeling  
that we weren't just buying a tool,  
we were joining an organization!"**

**W**ORD FOR WORD, that's a statement from a new customer. He wrote us commenting on the service which hundreds of old customers take for granted when dealing with Warner & Swasey.

This customer was talking about the complete service which is spearheaded by 45 Warner & Swasey Field Representatives. Their basic philosophy is to put the customer *first*—to work with him individually to best serve his particular requirements.

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Many companies have profited from the use of a wide variety of manuals and technical literature made available by Warner & Swasey. Others lean on the Field Representatives for the selection of the right machines for their particular requirements.

There's no pat answer, of course. Warner & Swasey service is tailored to your specific requirements. Give us a call to see what this means in terms of *your* machining needs.



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in numbers. In 1920, barely 2% of the worsted wool consumed in the U.S. went through the hands of topmakers. Today a good bit more than half of it does.

• **In Between**—The broker is the only middleman on the street in the conventional sense. Usually he stands between the wool grower and the dealer or topmaker; increasingly he is bypassing the dealer and handing wool direct to the mills. Most frequently he is an agent for one or more producer groups in the West or abroad. He works on a commission basis only (1% to 2%) and never holds title to wool.

All a broker needs to set up business is knowledge of the trade (no easy requirement to meet), an office, a telephone, and some good connections.

• **Risky**—It's the dealers who take the risks. They tie their money up in wool, often for as long as six months while it's in transit from grower through commission mill to manufacturer. A lot can happen to prices—and to the dealer's investment—in that time. They can go up, netting the dealer a handsome speculative profit, or they can go down precipitously, as they did last year when wool rose from about \$2 a lb. in July, 1950, to \$4 in December and then dropped almost straight down to \$1.70 in June, 1951.

It's a credit to the trade that it managed to ride over that unprecedented peak and dip with only one casualty. All other houses came through intact—rocked on their heels, to be sure—but standing.

• **Sixth Sense**—Consider the risks involved. There are four of them that call for the keenest kind of judgment: (1) market demand; (2) price fluctuation; (3) inventory financing; and (4) shrinkage.

It's the dealer's job to anticipate his customers' needs—to sense six months ahead of time whether fall styles will call for white wools or oyster white. It's up to him to buy when the price is right—to judge whether the trend is up or down. His is the worry of how best to safeguard what may be a \$1-million investment in inventory.

• **Shrinkage**—Finally, it's the dealer's ability to estimate how much the wool he buys will shrink that often makes the difference between profit and loss.

On Summer Street, shrinkage means the amount of clean wool you will have after all the grease, dirt, and burrs have been scoured and carded out of a load of raw wool. While shrinkages may run from as little as 10% to as much as 80%, woolmen uncannily can strike their estimates within 1% of true every time.

They must; their living depends on it. Before they agree to a grower's price for 100,000 lb. of wool in the grease, dealers have to figure how much

that lot will bring them clean. If they underestimate, even by as little as 2% they're out their own margin and maybe more.

• **Tool of the Trade**—To help him compute price clean basis from grease, given shrinkage, every dealer carries, usually in his hip pocket, a shrinkage book. It's actually the tool of the trade—along with a pocket knife for opening wool bags—and is often handed down generation to generation as kind of a good luck piece.

In a typical transaction, the Boston agent of a New Zealand broker came to a dealer on Summer Street last April and offered him 100 bales (about 32,000 lb.) of super halfbreed lamb slipes, April length, at 46½ pence (\$4.6) a lb. f.o.b. New Zealand. The dealer's problem: Is this a favorable price, counting costs and markup? Here's how he figures.

Freight plus handling charges bring the price per pound to 60¢ landed Boston in the grease. Shrinkage is 25%—or a clean cost of 80¢ a lb. A duty of 25¢ brings him up to \$1.05 a lb.

Overhead—including sales cost, office expense, and warehousing—is 5%, or about 5¢ in this case. Figuring a clear profit of 2¢ a lb. brings the sales price to \$1.12. The market will bear it; it's a deal.

The dealer puts up \$16,600 through his Boston bank, has it send an irrevocable letter of credit to the New Zealand broker. The broker gets his money as soon as he can certify that all the wool ordered is on board bound for Boston.

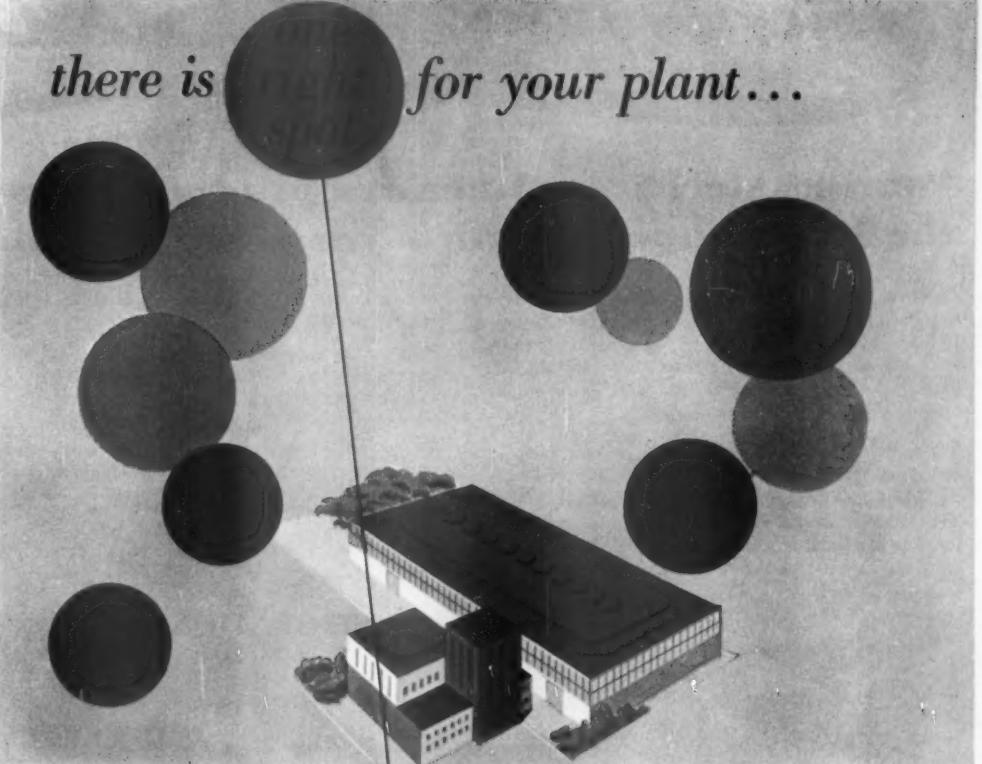
But the dealer doesn't see his money again until he sells the wool—probably not before next October. In the six months interim, he's out \$16,600 on this small deal alone and wide open to loss through a drop in the wool market. He wants protection.

If he had purchased fine (or thin staple) wool, which he did not, he could get protection through the futures market. He could set himself up in what's called a hedge operation by selling contracts for wool for future delivery. Simply put, this means that if, by next October, the wool market has fallen, say, 10%, the dealer will be able to buy back, at a 10% discount, the futures he sold in April, just covering his loss in the value of actual wool purchased.

### III. The Futures

The advent of this futures market is probably the single most significant development in Boston wool trade history.

Actually, there are two futures markets. One is the wool top market, begun in 1931, and the other is the wool (or grease wool) market, started

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panies. Two of the other furnaces also will be increased to the 550-ton size.

National's enlargement of open hearth facilities is an important part of its general program to expand steel capacity to a total of 6,000,000 tons by the middle of 1953 . . . the fastest growth of any major steel company since the war. This expansion of capacity contributes importantly to America's assurance that it will have plenty of steel, both for defense and for steadily increasing civilian use in the present and future.

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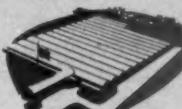
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## "... How long can Boston keep its title? ..."

WOOL starts on p. 48

in 1941. Both the trading rings are in New York's Cotton Exchange, the center of futures trading know-how.

• **Trend Grows**—As a measure of their increased use, in 1946 less than 20-million lb. of top were traded on the top futures market; last year over 119-million lb. were traded there. In 1946 less than 524-million lb. of grease wools were traded in the wool market; over 1-million lb. more than that was traded just during last May.

The wild price fluctuations in wool last year gave the market its biggest boost. In general, those dealers who were in futures came out of the shuffle far better than those who weren't—and the word got around.

• **Big Influence**—Never underestimate the influence of Boston banks. Dragging their heels at first, they have since had much to do with raising the popularity of the wool futures market.

Without cooperation of Boston banks, Summer Street is helpless. It depends on them not only for most of the money with which it does business, but also for handling the mechanical details such as issuing letters of credit, so essential to the trade. The dependence is mutual. Summer Street makes up a sizable chunk of the lending business that Boston banks do each year.

All banks follow about the same, extraordinarily liberal, lending formula: They will loan up to three times a dealer's working capital. Very few trades have earned that kind of confidence.

• **High Code**—Confidence comes from the high code of ethics that extends all through the street. Word of mouth is as good as a signed contract—even word by telephone, as most orders are placed.

• **How Long?**—Up until the 1920's Boston could claim to have at least 95% of the nation's woolen and worsted looms within a 350-mi. radius of the city. Today that claim is weakening; there are not more than 60% of the looms within that radius. A sizable share of them have moved south, following the migration of cotton mills.

This shift is raising the question: Just how long can Boston keep its title as the capital of the wool trade? Isn't Charleston or Savannah or New Orleans the natural place for the growing trade to move?

The consensus of woolmen is that it will stay in Boston until less than half of the consuming looms are centered in the New England-New York area. "That will be long after my lifetime," a woolman comments typically. "I'm not worried."



## Be there... with Zippo!

There's one sure way to make a man think of business—with pleasure—whether he's off on a cruise or attending a conference. Give him a ZIPPO Lighter, engraved with your company trade-mark. ZIPPO builds good will and keeps it—because it's the lighter that always lights with a zip, even in wind or rain. Yes, wherever a man goes, be there with Zippo—making him think, with pleasure, of your company every day for years. And—it costs so little to do... send the coupon and see.



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# PRODUCTION



WORK GLOVES like these used by Ford welder used to land on the scrap heap when they wore out, now they're salvaged.

## SALVAGE PROGRAMS PROVE

### There's Cash in the Trash Basket

With operating costs going higher every day, manufacturers are squeezing hard to get the last cent out of every dollar they spend. The auto-makers around Detroit have hit on a big saving in the most obvious place—the scrap pile.

They've found that a lot of the things they used to toss on the heap are still worth a lot of money. A worn pair of work gloves, or a small, dulled cutting tool, say, can be salvaged, repaired, and put back to work.

• **Catching On**—General Motors started digging into the scrap pile right after World War II, and its salvage operation has been getting bigger ever since. Ford and Chrysler, GM's chief competitors, are catching on fast.

The auto companies have discovered some neat salvage tricks. But many of the salvaging processes are pretty run-of-the-mill. They are the sort of thing that any plant—big or little—can do if it keeps its eyes open for salvage opportunities. Broken tool teeth are brazed back into place. Cutting-tool sections are welded together into a

larger tool when they get worn down to the nub. Bigger tools—drills, reamers—are ground down to smaller sizes. Hammers are refaced, and chisels are reworked to take out the nicks.

Chrysler reports that in the past year it shipped about 90,000 tools from its salvaged stocks. This could add up to hundreds of thousands of dollars a year, much bigger savings than would come from scrapping the tools out at steel junk prices. But Chrysler and the other auto-makers are cagey in talking about savings they make on salvage. It gives one company an edge over another, they feel, and it might make their suppliers unhappy.

• **No Rule-of-Thumb**—Salvaging requires just two things: craftsmanship, a common commodity around any factory, and administration. There is no fixed pattern in setting up a salvage operation. Some companies set up a separate salvage department; others let each operating division take care of its own reclamation work.

Ford uses the first method. One general department handles the entire

tool reclamation, and is the catch-all for every other kind of used-up material—metal scrap, worn belting, burlap bags. The unit buys the throwaways from the various operating divisions, salvages what it can, then sells them back again. Each year it supplies the company with tools worth millions of dollars, at half the original cost.

Each article that is whisked from the trash basket is checked over by one of the 177 people in Ford's salvage program. Some of the stuff is immediately sold as junk or scrap. The rest is tagged for reworking. Gaskets, for example, are routed to the hand-tool department where they are made into smaller sizes. In one month, the hand-tool section sold nearly 23,000 items back to various divisions.

• **A Step Farther**—Chrysler uses a slightly different approach. It puts salvage under the same department that sets standards for its purchasing—Non-productive Materials Control. The theory is that a department salvaging materials which it originally bought might uncover flaws in the way the



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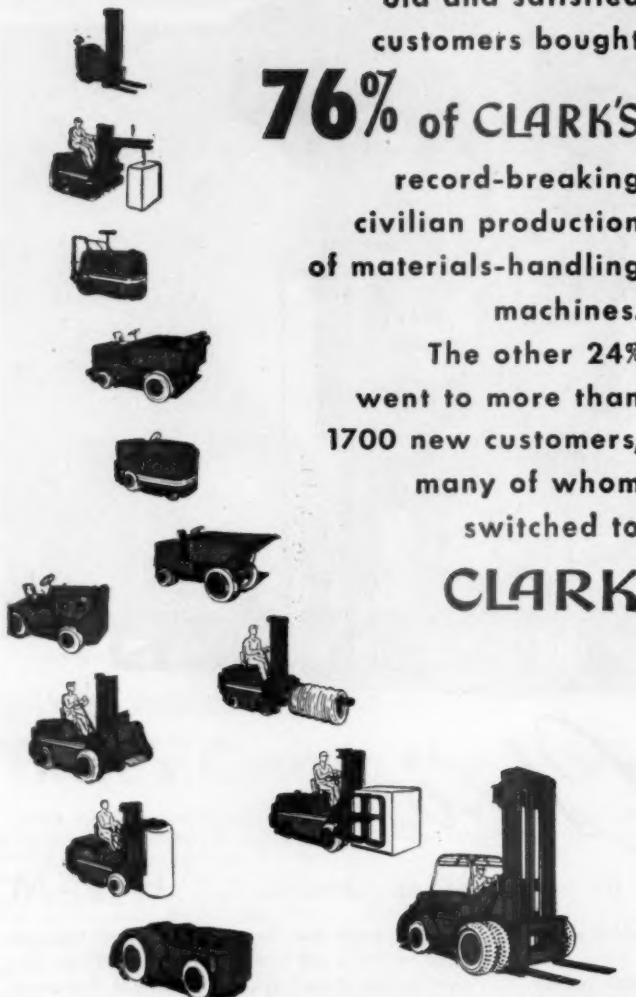


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*...GM's salvage operation  
is probably the biggest of  
all..."*

SALVAGE starts on p. 58

material is being used. NMC might find that a certain tool that bobs up in salvage more often than it should isn't being used properly in the first place, or that the specifications should be altered by the supplier.

Chrysler's NMC carries salvage a step farther. It also processes tools that are not necessarily worn but are obsolete; some are still packed in original containers. If there is no short-term use in sight for a certain obsolete tool it is scrapped. If there is a chance that it might be used, it is stockpiled in a specific bin, then entered in a card file by dimension or size.

When an operating division needs a tool, NMC checks the requisition against the card file. If it has a tool that will serve the purpose, the tool is sent out, cut down to the right length, or reground to the desired cross-section. Chrysler uses this system whenever the reclamation can be done for less than half the cost of a new tool. Actually, average costs run considerably less than half.

• **The Biggest**—General Motors' mammoth salvage program is divided among the corporation's major divisions, but information on procedures is centralized in its Process Development Section so the whole corporation can use it.

GM's salvage operation is probably the biggest of all. Its plants do everything from cannibalizing worn work gloves to paring down giant-sized grinding wheels. The actual work is done by the appropriate department—the master mechanic, process engineering, or materials control. Sometimes it is assigned to a specific individual, or to a committee.

Process Engineering assigns a co-ordinating authority for specific types of work. He keeps track of reclamation ideas throughout the plant and everywhere else, applies them wherever he can. He sits in on GM corporation-wide meetings covering his area of work and sets up procedures for his own plant.

• **New Methods**—The divisions are experts in specific kinds of salvage jobs.

Some divisions, for example, follow broken tool tips with special care. Oldsmobile has set up an induction heater which has paid for itself many times over in salvaging, turning, and checking many kinds of tools—drills, parting saws, carbides.

GM is patenting a method its Turnstid division uses to salvage buffing wheels. It saves more than \$100,000

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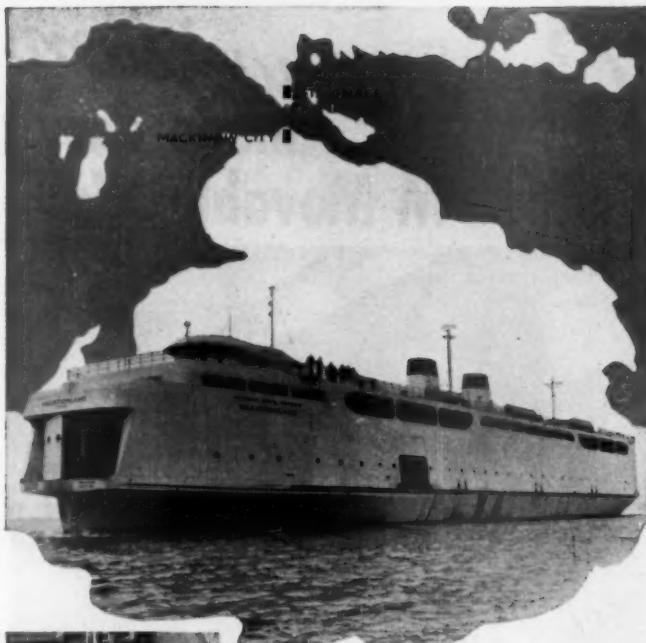
Johns-Manville Walls may be used as ceiling-high or free-standing partitions. The complete wall, including doors, glazing and hardware, is installed by Johns-Manville's own construction men under the supervision of trained J-M engineers—responsibility is undivided.

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**"... Some divisions figure they save \$25,000 a year on gloves..."**

**SALVAGE** starts on p. 58

a year. When 10-in. or smaller wheels wear down to unusable dimensions, Turnstedt die-cuts them, then folds each one over once so it forms a segment to a circle. Several wheels are then assembled into a 17-in. diameter wheel. The segments can be worn down to within an inch of the hub, before they are finally discarded. GM formerly sold its wheels as scrap at  $2\frac{1}{2}$  per lb.; now it gets at least 75% utilization out of the scrap.

• **Ingenious**—Several divisions are ingenious with leather and canvas work gloves. Workers handling fenders, for example, wear out gloves across the palm; other workers have the wear across the fingertips. Good sections of gloves from one wear group are cut out and glued to the threadbare portions on another group. Some divisions figure they save approximately \$25,000 a year on gloves.

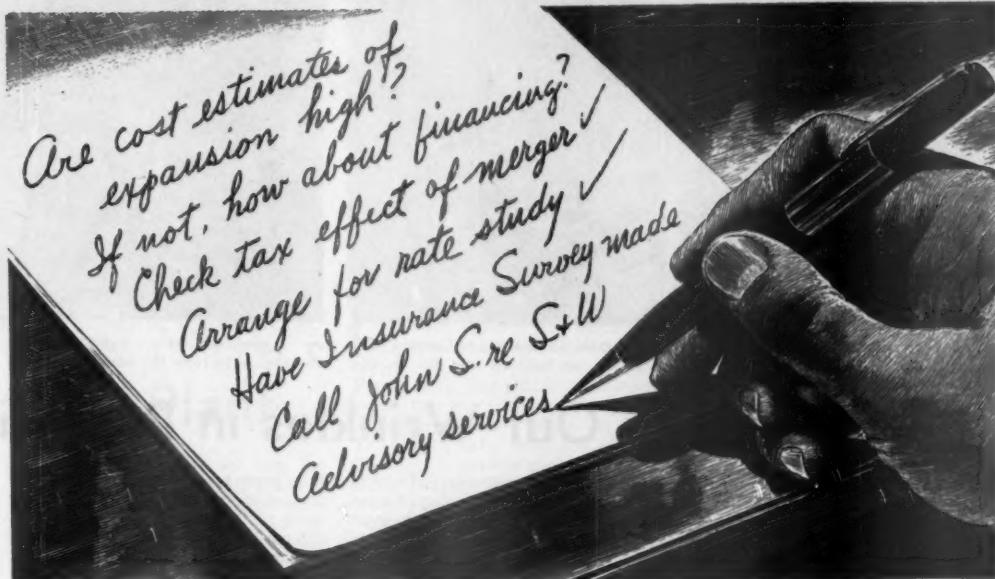
General Motors is completely fascinated with the savings possibilities of such programs. Its Process Development Section issues semi-monthly bulletins with case histories that show what can be done. It also keeps up a constantly-changing exhibit of the latest tricks it has unearthed.



**Underwater Truck**

The snorkel tubes jutting out of the water (above) belong to a new military truck, the M-135, developed by General Motors Corp. The completely submerged truck is towing a 5,000-lb. cannon during recent jungle tests in Florida.

# Is yours a Management Problem?



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1 Full-scale paper-making machinery (left) ordinarily takes 33-in. logs. At Crown Zellerbach's pilot plant (right), small logs (5 in. across) are hand-fed into the chipper.



2 A small-scale cooker (right) heats the fiber away from the binder in exactly

## Smoothing Out Wrinkles in Paper in

Since its early development by the Chinese in the 2nd century B.C., paper making has gone through many stages. And all along the line, it has kept abreast of industrial development. Today, silicone paper is used for cleaning eye glasses; wax-coated paper for milk containers; and paper tape for sound recorders. Still more developments lie ahead—such as fungicidal papers to prevent mold in packaged fruits.

• **Production Problems**—But, as in any other branch of industry, new developments in paper raise a whole new crop of problems, which often call for new

manufacturing techniques. To lick these problems in the lab stage, Crown Zellerbach Corp.—West Coast paper manufacturer—has built an experimental laboratory with a \$500,000 pilot plant at Camas, Wash. The miniature plant contains small models of all the machinery required for the making of paper.

In the past, as the chemists in the laboratories finished experimenting with test tube lots of a new kind of paper, the company's production machinery had to be used for ironing out production problems. This meant that the

huge paper machines had to be stopped and set up for the tests. After a small batch of the new paper had been run, the machines were again shut down to await the results. Or they were reset for other production. In either case, the stopping, cleaning up, and resetting of the big machines ran into money. But it didn't happen often enough for anyone to feel that investment in pilot plant equipment was worthwhile.

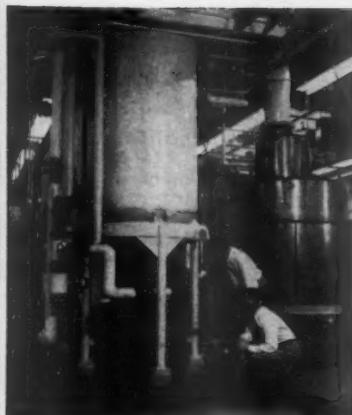
As the number of new types of paper increased, however, Crown Zellerbach began to study the idea. Finally it became apparent that, compared to the



4 Moisture is filtered from the pulp fiber in the production-size mill (left) or the pilot plant decker, so that the fiber can be stored for future use.



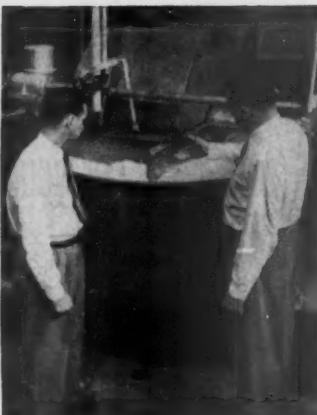
5 On miniature model, the pulp spreads out on a 26-in.-wide screen leading to



the same way that the regulation-size pulp digester reduces wood chips to pulp.



3 One-tenth as much pulp mixture is fluffed out in the hand-fed laboratory beater (right) as is similarly treated in the 2,000-lb. production beater.



## a Pilot Plant

losses in shut downs of the large machinery, the small-scale plant would be more economical. So C-Z went ahead and made the break.

Pilot plants are not new in industries where changes occur often. But because of the complicated machinery needed for paper making, no attempt had been made to duplicate a paper mill on a small scale.

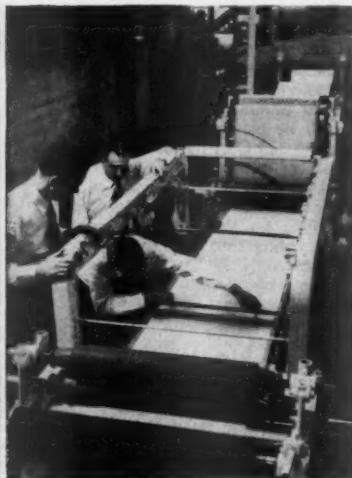
In making the small plant, C-Z engineers felt the plant should do all of the things possible in the full-scale operation. And, in fact, they have added a few things not on the large machines.

For instance, the pilot line includes a coater that has more capabilities than any single machine in any of the Crown Zellerbach plants. With it, C-Z chemists hope to develop coated or treated papers different from anything yet attempted.

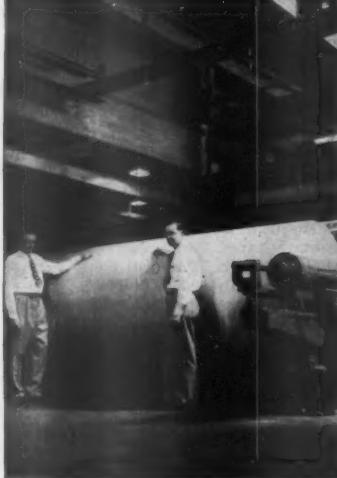
• **Market Research**—Crown Zellerbach expects that the model plant will pay off in other ways. When a new type of paper has been developed, small commercial quantities of the new paper can be made on the pilot mill. These can be used for market research, for experimentation in printing shops or other applications. If the new paper meets with a commercial demand sufficient to make large-scale manufacturing practical, techniques learned on the small

machines may be easily shifted to the paper-making plants. If new problems develop, they can be solved on the laboratory machine before the big machines run out large quantities of waste paper. When a customer wants a special type paper on a small order, it can be made commercially on the pilot plant machines.

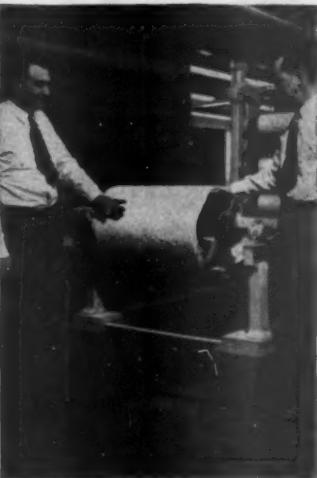
The new mill will be used for experiments in the paper-making process as well as in the various types of papers made. Dr. Wendell Moyer, director of research for C-Z, expects to use the mill for testing wood species that are not generally used in paper making. Even those nonwood sources of fiber, such as wheat straw and cotton stalks, will be studied.



the paper machine. Regulation-size sheet (left) may be nearly 240 in. wide.



6 Winders at the end of both the small-scale and large (left) machine roll the finished paper up for shipment or for laboratory testing.





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## More Domestic Manganese

That's the goal of government program to pay premium prices for small-lot ores. New recovery methods sought.

The U. S. government this week moved into the high-cost manganese market, waving a fat checkbook. General Services Administrator Jess Larson announced that over the next four years the government will buy 19-million long dry tons of manganese and concentrates in small lots.

The CSA purchasing, which will at least double the present market price, is aimed at several targets, all of which would in the long run lessen U. S. dependence on imports of manganese.

• A shot in the arm for small U. S. producers, who mine less than 10,000 tons a year.

• A spur to exploration which would open up more domestic mines.

• More research for the development of new chemical processes for the recovery of low-grade ores. That could be the biggest item of all: A new method might make it economically feasible to recover plenty of manganese from the nation's fairly extensive low-grade ore supplies.

• **Freight Costs**—GSA plans to do more than just double the market price. First of all, it will pay \$2.30 per long ton unit of manganese contained in ore or of concentrates with 48% manganese. Just before the steel strike, similar grade manganese was selling for about \$1.15 per long ton unit. It will also pay for transportation of the ore to the consumer from the rail point nearest to the mine. The mine's only transportation cost will be trucking to the rail point. GSA will consign the manganese directly to consumers; it won't go into the national stockpile.

Actually, manganese isn't what you would call scarce, despite its essential role in the steel industry. Strategically, though, it has been something of a headache (BW—Feb. 24 '51, p57 and Mar. 10 '51, p22). Here's the picture:

**Imports.** More than 90% of the manganese used in the U. S. comes from overseas. India, the Gold Coast, Brazil, and the Union of South Africa are the main suppliers.

**Domestic supply.** Output has remained negligible because of the high cost of getting manganese from small mines and low-grade ore. Government efforts to encourage production in Maine, the South, and the West have met with little success. With current recovery methods, it is doubtful the Western Hemisphere could supply two-thirds of our needs in an all-out war, regardless of cost.

**Stockpile.** The government has been stockpiling manganese since the Korean

outbreak. The goal is a two-year war supply, with African imports cut off. GSA says the stockpile situation is "not too favorable." High industrial needs have left the pile a meager share. From the defense point of view the steel strike is blowing one bit of good: It's giving the stockpile a break.

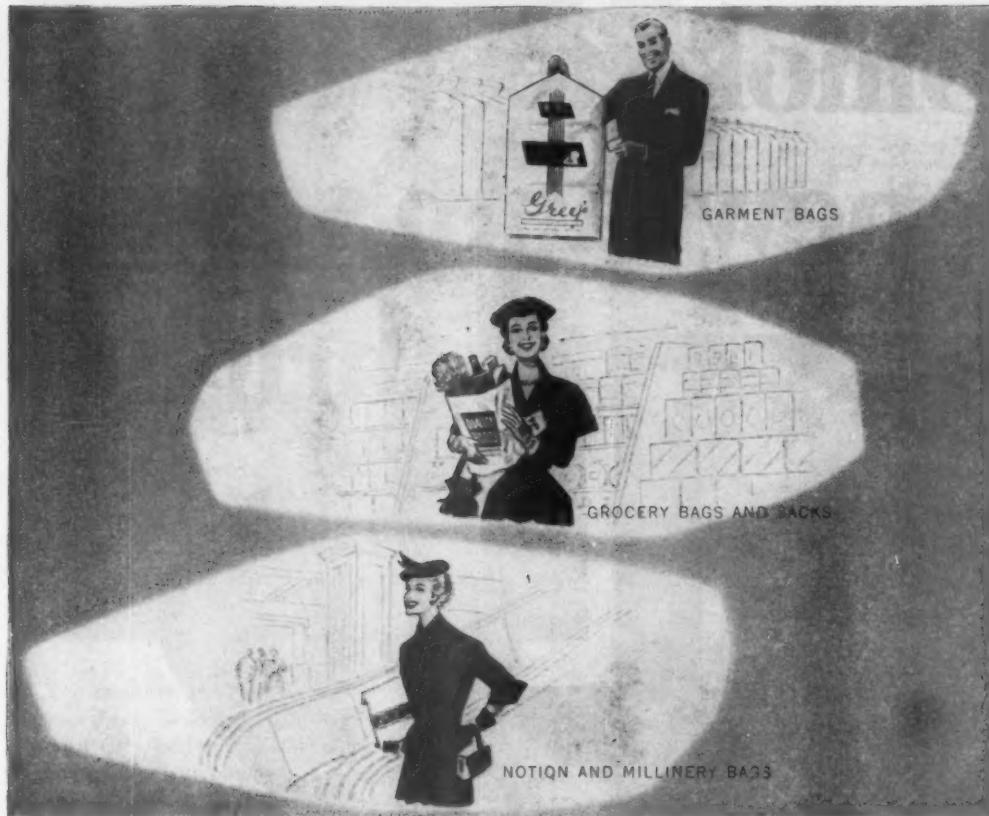
For its purchasing program, GSA arrived at the 19-million-ton figure because it had enough money to buy that much. No formal survey was made of how much domestic ore was available. But it's doubtful that the program will reach its target quantity, or that it will make a dent in imports. By the same token, there's little chance that private inventories will be built up. Any ore that GSA uncovers will be promptly gobbled up by immediate consumption.

• **At the Market**—GSA will run its program this way: Any small lot of manganese accepted at a rail point will be promptly allocated to a consumer at the market price. GSA, which will be paying a guaranteed premium price, will swallow the loss. GSA claims that it is not competing with industry, but will just bolster supply in a market where demand greatly exceeds available quantities.

The government is already set up to purchase manganese through three depots: Butte, Mont.; Phillipsburg, Mont.; and Deming, N. Mex. A new depot has just been opened at Wendon, Ariz., which will also participate in the program. Although the new program is aimed at small producers, larger ones may still negotiate with the government for sale of ore to the national stockpile.

Relatively high specifications have been set by GSA. That's because the ore will be consigned directly to the consumer and GSA has no facilities for upgrading. It expects the small producers to howl bloody murder at the specifications, but it will not go lower than 40% for the small-lot program. For the national stockpile, GSA accepts ore as low as 15%. That's because the stockpile is not for immediate use, and can be milled later.

Four private operators have already made commitments to start producing high-cost ore. These companies, which signed up before the GSA program was announced, are: International Mining Corp. and Denver Equipment Co. (doing business as Manganese Producers Inc.), of El Paso; Manganese, Inc., of Henderson, Nev.; Westmoreland Manganese Corp., of Cushman, Ark.; and Electro-Manganese Corp., of Knoxville, Tenn.



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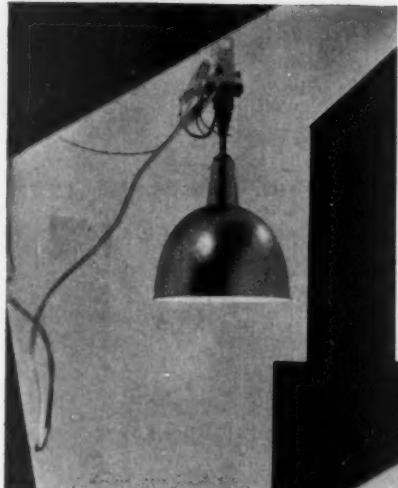
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Diesel engines belch oily smoke into the air. That's why a diesel engine roundhouse was chosen to test a conventional lamp with reflector, and a Westinghouse R-57.

Before the test, the light output of the lamp in reflector, and the R-57 were measured in a photometer. After hanging for one month in the high bay of the roundhouse, they were returned to the Westinghouse laboratories for another photometric reading.

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## MORE THAN MEETS YOUR EYE

by Sam Hibben

**LIGHT IS THE STAFF OF LIFE.** Without sunlight, there would be no plant life, no food for animals. Light enables the green leaf to take carbon dioxide from the air and make plant tissue. The magic worker in all green plants is "chlorophyll" (which means *green leaf*). It exists in a thin skin around the earth—about fifty feet below the ocean's surface, to some three miles above it. Light and chlorophyll create the "bread" by which we all live. Strange, isn't it, that a man has never learned to make the chlorophyll that makes his own life possible.



**LIGHT IS AS INVISIBLE AS THE WIND.** What we see is not light, but the objects that intercept or reflect light waves. And if objects did not break light down and send us portions of the spectrum, we would not know color. Ever think about the peculiar structural differences that make the red rose petals reflect light so differently from the white lily, or the blue violet?

**BALANCING THE SPECTRUM.** Mercury lamps are very efficient sources of light. But they give a greenish light, and are often paired with incandescents for color correction. Since the latter do not last as long, the labor cost of replacing them lowers the economy of mercury lighting. To correct this, Westinghouse balanced the mercury spectrum. The ultra-violet, normally wasted on the inside of mercury lamps, was simply put to work. In the new Westinghouse 1000-watt C-H12, and the 400-watt J-H1, the ultra-violet causes a special phosphor coating inside the bulb to fluoresce red. The light from the phosphor and the mercury vapor blend into a golden-white light of great efficiency.

More next month.

*Sam Hibben*

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**Lake Erie Proposals** submitted to Caterpillar Tractor Co., led to the selection of this battery of hydraulic presses of (left to right) 750 tons, 500 tons and 2,000 tons capacity. Caterpillar now has a total of 8 Lake Erie Hydraulic Presses in service... reports that they are contributing substantially to efficient plant operation.

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## SARA's Debut

Electronic trouble-shooter makes her bow in industry in TVA's Johnsonville power plant.

For the next few weeks, the electric-power engineers of the world will be anxiously watching the Tennessee Valley Authority's Johnsonville (Tenn.) power plant. This is where SARA will make her debut. SARA, whose technical name is "Sequential Automatic Recorder and Annunciator," is an electromechanical brain. She was designed to provide split-second trouble-shooting in the spaghetti-like electrical mazes of modern power plants.

Industry has high hopes for SARA. She may be the first of a long line of sequential memory recorders—if she is as quick and as accurate in reporting defective wiring and parts as her makers claim. SARA was built by Taller & Cooper, designers and builders of a wide variety of electronic and electro-mechanical devices. She will be installed for TVA in the next 10 days.

• **To the Rescue**—SARA will be set up at the central control panel of the plant. The practice of hooking up a large number of vital operating points to a central panel in a complicated power plant is old stuff. However, for years there has been a deficiency in the system. When some device fails or becomes defective, a whole sequence of events take place all through the plant. The sequence happens so quickly that the whole thing looks like just one big flash.

This is where SARA comes in. She can detect as many as 400 types of occurrences which might take place. She reports and records when and where the conditions occur, and when operations are restored to normal.

• **Photographic Memory**—In a power plant an occurrence would mean any deviation from normal operating conditions. It could be an overload, a short-circuit, a leak. SARA will provide a continuous record of normal operations, as well as any deviations, in transformers, boilers, turbines, circuit breakers, and other auxiliary equipment.

In addition, SARA has a memory device which can store up reports on a chain of occurrences which might happen in a sequence as close as ten thousandths of a second apart, then feed the reports to a built-in recorder and printer. This means that the man at the central control panel in the plant has right next to him, for the first time, a completely detailed written record of everything that happens.

SARA is a kind of electromechanical

Tigers  
*to*



## Turret Lathes

Progressive shippers look to  
**DOUGLAS** for the newest,  
fastest air freighters!



To meet the nation's needs for the swift

movement of critical machines and materiel, Douglas DC-6A *Liftmasters* are now in  
service on leading airlines. Scores more are being rushed to completion.

Already thousands of firms—large and small—have found air freight successful in

combating higher costs. Air freight helps reduce  
inventories, permits overnight distribution, saves on  
packaging, damage, insurance. Investigate the many  
advantages of air freight—in addition to speed and convenience!

Consult your local airlines for information. Douglas Aircraft Company, Inc.



★ ALL TIME ★  
**ALL STARS**  
 by Grantland Rice



**"BOBBY JONES"**

**HIS UNUSUAL RECORDS**

When he retired in 1930 at the age of 28, Bobby Jones had compiled the most amazing record in golfing history. His 13 national and international championships included the U. S. Open 4 times, British Open 3 times, U. S. Amateur 5 times and the British Amateur once. He reached his great pinnacle in his final competitive year, 1930, when he won golfdom's "grand slam". For, between May and September of that memorable year, he took the U. S. Open, British Open, U. S. Amateur and British Amateur titles . . . the greatest single season anyone had ever known in golf!

Another unusual record: offices of 7 of America's 8 largest book publishers, 12 of the largest 15 railroads and 8 of the nation's 10 largest tobacco companies get better-looking letterheads or office forms with clean, crisp, distinctive . . .

**ATLANTIC BOND**

*Business* **PAPER**

MADE BY EASTERN CORPORATION • BANGOR, MAINE

Write us on your letterhead for Grantland Rice's complete selections of golfdom's All-Time Greats, attractively illustrated and suitable for framing.

newspaper, complete with reporters, editorial desk, and a printing plant. Her reporting side is a complicated system of conductors and relays, by which it is possible to have a reporter stationed at every point in a plant where it is important to have split-second news of any occurrence. These reporters flash in to a central desk a running story of exactly what is taking place. From the desk the news is actually put into print by the transference of impulses to the recording and printing mechanism of the system.

• **Impressive Build**—SARA is almost as impressive physically as she is mentally. She weighs about 5,000 lb. The brain is contained in a cabinet 12 ft. long by 7½ ft. high; the body consists of a desk housing the annunciator and printer. Her nervous system has 20,000 ft. of electrical conductors, over 400 relays, 20 selector switches, 300 condensers, and many other components. The console reporting board into which sequential impulses are fed to be digested and recorded, is about the size of an apartment-sized upright piano.

**PRODUCTION BRIEFS**

A magnetic material, composed of bismuth and manganese, has been developed by the Naval Ordnance Laboratory, White Oak, Md. It exhibits better electrical characteristics than any known permanent magnetic material. Technical evaluations of stability, aging, and shock are not yet available.

First shipment of a major high-power TV transmitter since the 1948 ban on new stations, was made this week by the RCA Victor Division of Radio Corp. of America. The 25-kw. model was shipped to station WSAZ-TV in Huntington, W. Va. It is one of 31 stations which will change channels as part of Federal Communications Commission's national TV expansion.

Atlas Powder Co., Wilmington, Del., has signed a contract with the Army Ordnance Corps to act as consultant in the \$23-million reactivation of Volunteer Ordnance Works, near Chattanooga, Tenn. It will also operate the works which will turn out TNT.

Too clear: One reason technical reports aren't made brief and lucid is that the clients don't want them that way, says Frederick S. Bacon Laboratories, Watertown, Mass. In one case, they say, a client given a choice selected a report that was as corny as the lab could concoct. Complaints come in stating that the lab reports are "not scientific sounding" and "not long enough."

PUTTING *Air* TO WORK FOR CARNEGIE TECH



Lead bricks and special fume exhaust equipment protect "Hot" lab technician from two hazards—direct radiation and contaminated air.

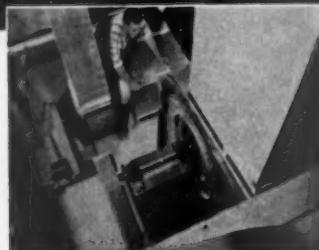
## HOW TO TAME "HOT AIR AROUND RADIOACTIVE MATERIALS

In the hand of the technologist is an awesome new tool—the radioactive isotope. But it is two-edged. With all its promise, it poses grave new problems in safety—including contamination of air by radioactive fumes, vapors and airborne particles.

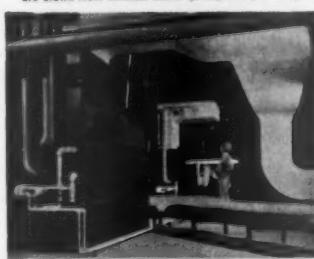
Control of dangerous air can be relatively simple, like the special laboratory hood and Westinghouse fume exhaust equipment shown here in the Chemistry Department at Carnegie Tech. In varying degree, the problem can be more complicated—like cooling the atomic pile at the Brookhaven National Laboratories. But for each case there's an effective answer.

For, long before the first reactor pile was built, Westinghouse engineers were studying and employing radioactive materials. In the Sturtevant Division this has culminated in a fund of knowledge and tested equipment for safe control of "hot" atmospheres.

If you are using radioactive materials, or for that matter if you have *any* air handling problem where it pays to be sure, check into Westinghouse equipment for air handling, air cleaning and air conditioning. Call the Westinghouse-Sturtevant office nearest you, or write to Westinghouse Electric Corporation, Sturtevant Division, Hyde Park, Boston 36, Mass.



Silentyane® Fans move the large volumes of air which are drawn from exhaust hoods quietly and positively.



Westinghouse air conditioning and air handling units help keep laboratory temperature and humidity constant.

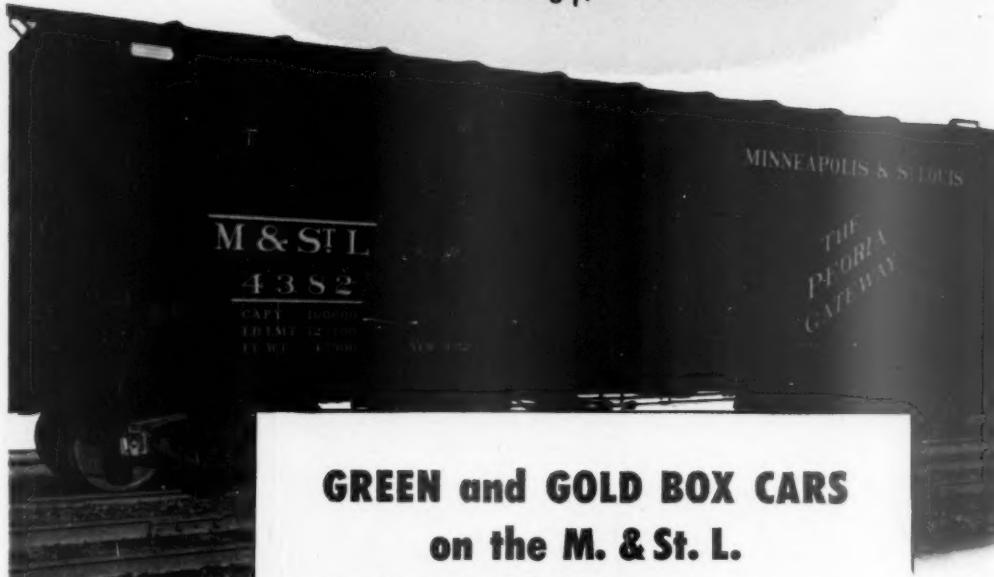
YOU CAN BE SURE...IF IT'S **Westinghouse**

J-80250

TUNE IN ON HISTORY! Only Westinghouse brings you complete coverage of four-month political campaign over CBS television and radio.

AIR HANDLING

There's Something *New* on the Rails...



## GREEN and GOLD BOX CARS on the M. & St. L.

### ***Green Cars with Gold Markings!***

For more than a Century, since freight first rolled on a Railroad in a "closed car," roofed and walled to protect the shipment, Box Cars have been Red. "Box Car Red" is a tradition, like "the little red schoolhouse."

Today, some 750,000 Box Cars are at work on American Railways. Practically all of them are Red. True, there are about 130,000 "reefers," mostly yellow or orange, the "closed cars" that are refrigerated to safeguard perishable freight.

But Box Cars have been Red until just now, when Something New appeared on

### ***The MINNEAPOLIS & ST. LOUIS Railway***

700 Shining New Cars, each a rich dark green with bright golden markings, have been added to the fleet of M. & St. L. Box Cars already in service. Each is of 50 tons capacity, all-steel and modern in design and construction, like other equipment on the Diesel-Powered M. & St. L.

Splashes of Green and Gold in freight trains—something new to tell the world about Fast M. & St. L. Freight Service in the Great Midwest.

### ***The MINNEAPOLIS & ST. LOUIS Railway***

THE MINNEAPOLIS & ST. LOUIS  
THE PEORIA GATEWAY  
RAILWAY CO. DIVISION

## NEW PRODUCTS



### Demagnetizes Tools

Enco Mfg. Co. has developed a tool box device which will demagnetize your tools, dies, parts, and pieces quickly and efficiently. It's called "Miti-Mite" De-Magnetizer No. 500. You just slide it over the item to be demagnetized.

All there is to Miti-Mite is a small block base and an extension cord. The base is made of nonbreakable molded Tenite plastic. It's 14" wide, 4" long, and 13/8" high.

To work Miti-Mite, you press a button on the top of the device. That sets up a field of flux which neutralizes magnetism. Releasing the switch automatically shuts off the unit. Miti-Mite is practically noiseless. The base and metallic inserts have been specially smoothed so that sliding it over a part won't scratch the part. The unit is small enough to be used effectively in the cavities of die cast molds or to remove stray magnetism collected in punches or stamping dies.

• Source: Enco Mfg. Co., 4520 W. Fullerton Ave., Chicago 39, Ill.

• Price: \$10.50.

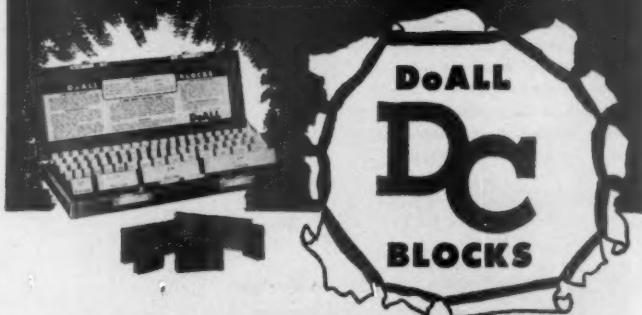
### Portable Fire Shield

A new lightweight fire shield enables a firefighter to approach with relative safety within 18 in. of a high pressure gas fire (850 psi. from a 6-in. pipe). The shield, an Ultralite glass fiber blanket fitted to a framework of tubing, weighs 26 lb. The manufacturer claims that a man can carry it on the run over ditches and rough ground. Two-man or three-man shields, on wheels, are also available.

The user sees through a "peep hole" at eye level. His face is protected by copper wire that disseminates and dissipates heat. A self-sealing opening for

## NOW - FROM DoALL

# The World's First Gage Blocks of an Entirely New Man-Made Material



### With this Exclusive Combination of Advantages

#### 1. NO THERMAL EXPANSION ERRORS!

Coefficient of expansion practically identical with steel; Interchangeable with steel gage blocks and steel parts.

#### 2. LIGHT WEIGHT!

Less than half the weight of tungsten carbide, approximately same weight as steel blocks.

#### 3. OUTLAST ALL OTHER GAGE BLOCKS!

Wearability many times that of steel and superior to chrome plated or tungsten carbide blocks.

#### 4. HIGHLY RESISTANT TO OXIDATION, CORROSION!

No oxidation at temperatures up to 1000°F. Resists perspiration and acids normally encountered.

#### 5. PERFECT STABILITY!

Will not change size nor chip even if accidentally dropped.

#### 6. PRICED LOWER THAN TUNGSTEN CARBIDE BLOCKS!

For complete information and literature, call  
your local DoALL Sales-Service Store or write:

THE DoALL COMPANY

254 N. Laurel Ave., Des Plaines, Ill.



GS-10R



## Why I gave the largest order to Bill



His office impressed me first time I saw it. The place had an air of quiet efficiency. He had figures we needed, right at his fingertips. Looking at his desk, I felt big things would get done because details were competently handled.

It gave me a clear picture of the kind of man I wanted to do business with. That's why I gave Bill the largest order.

"Y and E" makes the office equipment that is such an important part of this picture.

Attractive, efficient... "Y and E" helps you get things done—the way that gets the order. "Y and E" equipment is designed for success.

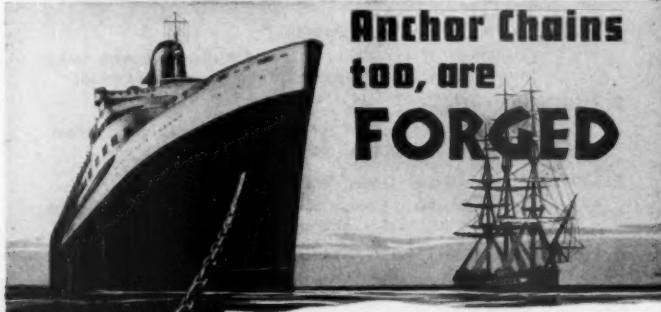
"Y and E" offers a complete line of equipment. Send for Steel Desk Catalog No. 3806 to find the desk that fits your needs.

Also Makers of Quality Filing Systems and Supplies



**YAWMAN AND ERBE MFG. CO.**

1006 JAY STREET • ROCHESTER 3, N.Y., U.S.A.



## Anchor chains too, are **FORGED**

The great superliner "UNITED STATES", fastest, finest, largest passenger ship ever built in this country, is a proud descendant in the lineage of American shipbuilding of the sturdy little frigate "UNITED STATES" which Commodore Stephen Decatur commanded in the War of 1812. With all their tremendous differences, these valiant ships are alike in one respect—in the use of anchor chain. Yet even in this similarity there is a mighty difference. The modern "UNITED STATES" uses forged anchor chain—drop-forged under Chambersburg Hammers. For only impact forging insures the enormous strength, ductility and toughness needed to absorb the tremendous shocks and strains to which this huge ship's anchor chain is subjected.

CHAMBERSBURG ENGINEERING COMPANY • CHAMBERSBURG, PA.

The anchor chain of the U.S. "United States", was made at Chambersburg. Manufactured from anchor chain and drop forgings of Bessemer Metal Co., by the "W.C. Bell" method, the only chain making process that can be called "true forged".

# CHAMBERSBURG

a hose can easily be cut through the shield. The Ultralite glass fiber is highly resilient and will not dent, break, or chip. It is impervious to wetting.

• Source: Gustin-Bacon Mfg. Co., 210 W. 10 St., Kansas City 7, Mo.

• Price: \$75.

## NEW PRODUCTS BRIEFS

**Asbesto-Kleen** is a cleaning concentrate designed to remove smoke and grime from asbestos siding. It's easy to use and fast acting. Just mix with water, apply with a bristle brush, and rinse clean with a garden hose. Price is \$2.98 per qt. (enough for a 5-room house) from White-Dye Co., 2970 W. Grand Blvd., Detroit 2, Mich.

A fingerprint remover has been developed by Gulf Oil Corp. of Pittsburgh to protect metal parts that have a fine finish and close tolerances. Gulf No-Rust FPR forms a thin film over the part and stops body acids and perspiration on the fingertips from staining or corroding the metal during handling. When the part is ready for use, the film can be removed with any petroleum solvent.

The shock of forging hammers, which sometimes can be felt a mile away, can be controlled by resting the foundation on steel-spring Vibro-Isolators and Mechanical Snubbers. The manufacturer, Korfund Co. of Long Island City, N. Y., claims that a coin will stand on edge beside the hammer while full strength blows are struck.

Mo-braze is a powder recently developed by American Electro Metal Corp. of Yonkers, N. Y., for very high temperature brazing of molybdenum and tungsten electronic components. The powder melts at approximately 3450°F and forms a continuous and very strong braze upon solidifying. Price is \$3.25 for a 1-oz. trial package.

Mercury lighting that gives off the familiar blue-green tint in industrial plants may soon be a thing of the past. Westinghouse Lamp Division has introduced a new 1,000-watt fluorescent mercury lamp, which produces a "golden white" light but retains all economy features of standard mercury lighting.

A practice golf ball made of Ensolite, a lightweight cellular plastic, has been designed by United States Rubber Co. It's so sensitive, it will hook or slice, depending on how it's hit. This means a golfer can remedy his faulty swing by practice. A healthy drive will move it about 100 ft.

Own  
your own  
JOY plant  
for making  
**HIGH-PURITY**  
**OXYGEN**

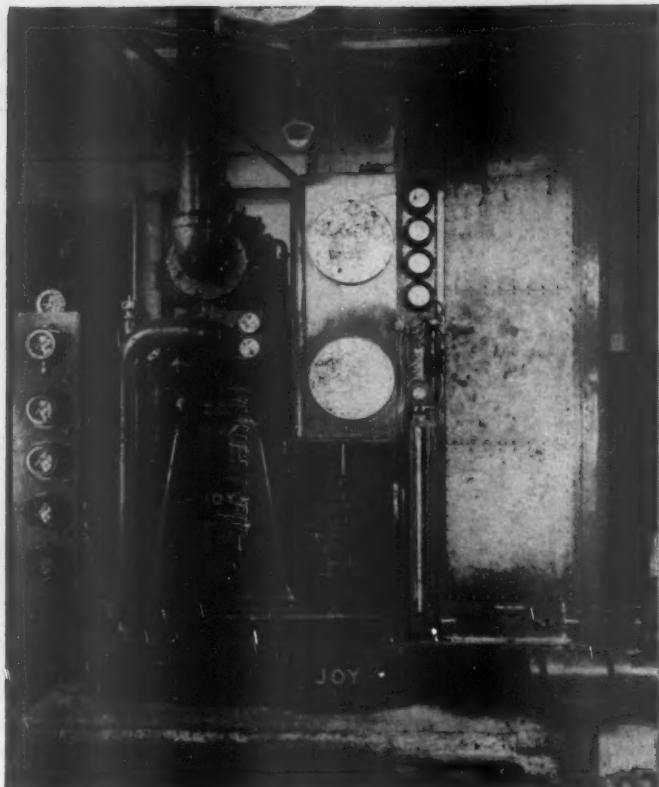


*'No other way  
is as cheap!'*

WHY depend upon outside sources for your oxygen supply? You don't buy compressed air in bottles or in liquid form — *why oxygen?* Especially when you can produce your own high-purity oxygen with a JOY Generator at a substantial saving—as much as 50%!

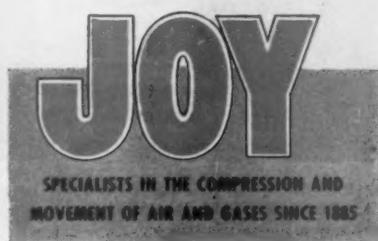
The Joy principle of operation is an exclusive development. It's completely mechanical and automatic . . . no messy chemicals to handle and no residues to remove. The only raw material used is air, and the units are self-cleaning. Operating pressure is low (only 185 psi) and the use of pop safety valves and an automatic shut-off system makes for high inherent safety.

JOY Oxygen Generators are remarkably compact, and as simple to operate as an air compressor. The complete line includes



units ranging in capacity from 500 to 12,000 cu. ft. of oxygen per hour at a purity of 99.5 + %. • For the most economical solution to your oxygen supply problems, write us your requirements. Address *Joy Manufacturing Company, Oliver Building, Pittsburgh 22, Pa.*

WAD 1-4818



# BUSINESS HISTORY



COMEDY AND THRILLS combined to keep the movie houses full in the early 1920s. Miles of celluloid in which Harold Lloyd escapes the villain the hard way are now part of the Eastman House collection.



SLAPSTICK was great stuff in the old

## Eastman House

All the real milestones in motion picture production were reached by 1910, according to James Card, assistant curator of the George Eastman House in Rochester, N. Y. Everything since then has been refinements of known processes—including color, sound, close-ups, double and multiple exposures.

Eastman House obviously knows what it's talking about, since it houses the world's greatest museum of photography. There you can trace the history of photography from the crudest imaginable equipment and pioneering motion pictures up to the newest developments in all these fields. Recently Eastman House and the Museum of Modern Art Film Library in New York pooled their resources to create the biggest collection of historical motion picture films in existence.

• **Record of Progress**—Eastman House was founded in 1947 by the Eastman Kodak Co. and the University of Rochester as an independent educational institution "to show the progress in the art and science of photography." It is housed in the 50-room mansion which George Eastman—founder of



"silents." Buster Keaton leered at a pretty girl, and the audience roared in the aisles.

## Collects the Old Timers

Eastman Kodak Co.—built in 1905, and willed to the University of Rochester. When the institute idea came up, the university turned the building over to the corporation as a permanent home for the collection.

Actually, the collection dramatizes the life and work of George Eastman, who is credited with being the father of modern photography. The house has a major display depicting Eastman's early struggles, his first patents and apparatus, and pictures and documents showing the growth of the company he founded. Eastman himself started the collection years ago, later the company added to it. Since then, practically the entire photographic industry has donated working exhibits showing its contributions to the science.

Museum visitors may see a replica of a photographer using the cumbersome equipment required before Eastman developed dry plates and roll film. There are hundreds of cameras dating back to the early 1800s—including spy cameras hidden in canes, lapels, neckties; huge aerial cameras used by the military in two world wars; posters and



GEORGE EASTMAN HOUSE in Rochester, N. Y., houses the world's biggest collection of historical films and photographic equipment.



### FROM THE DOUGLAS FIR COUNTRY

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HARDBOARD

Challenging comparison as a new leader in quality hardboard. Durable, dependable Allwood can be produced to answer your design problems, fit your plans or meet your manufacturing needs. Simpson Logging Company of Seattle, Washington, are the exclusive national sales agents for Allwood.



Allwood can be bent, die cut, scored, drilled, laminated, shaped, routed, planed, sawed, nailed, glued and processed in almost any way you wish or the job demands.

Send for FREE booklet, *The Allwood Story*.



**OREGON  
LUMBER  
COMPANY**  
BAKER, OREGON

\*Trademark of Oregon Lumber Co.



## Progress at Whiting

*A Bi-Monthly Series by Stevens H. Hammond, Chairman of the Board*

While psychologists may argue the point, in business, attainment of a goal is more enjoyable than mere anticipation of achievement. We at Whiting found the results shown in the 1952 Annual Report more rewarding than our expectations of making this the greatest year in our 68 year history.

Sales of the company rose to \$23,844,614 and profits after taxes rose to \$721,105—both new records. This profit figure is more than four times that of 1951 and is the highest since our founding. We attribute this record profit to: (1) the attention given to cost-saving econ-

investors, as evidenced by the rise of nearly 10% in the number of stockholders.

While the Annual Report has been published for our stockholders and employees, we shall be pleased to send a copy to anyone interested in studying our operation. You will find this report good reading because it is the most unusual published by the company in many years, covering all of our activities including research and development, foreign manufacturing affiliations, the growing importance of export sales, our full line of products and many other items of interest.

One of these items is the description of the international press party held at Avianca's Soledad Airport, Barranquilla, Colombia, to introduce Whiting's revolutionary *Loadair* automatic aircraft parking system which facilitates cargo and passenger loading and unloading. Avianca Airways recently set world cargo carrying records, which adds significance to the development. I believe you will find this, and other information in the report, quite interesting.

One cannot close a review of an annual report without commenting on future outlook. With a backlog of more than \$21 million, and with a sales force that has demonstrated outstanding ability, we are confident that the year ahead will be a promising and profitable one.

*Stevens H. Hammond*

WHITING CORPORATION

HARVEY, ILLINOIS



The revolutionary Whiting LOADAIR automatic aircraft parking system.

mechanical models of nickelodeon days; working exhibits of film making in the early days of photography.

One of the most popular exhibits is a Kinetoscope—a “peepshow” machine invented by Thomas Edison. This was the forerunner of Edison's projection machine, but the inventor didn't work out his improvements for some time. He thought the whole thing was a “temporary fad.”

• **Movies Confirm History**—About a year ago a \$300,000 theater was added for educational showings of the old movies. All the films are available for study by writers and researchers and by representatives of the movie industry who use the films to check historical data. Government officials studied some of them prior to landing on the French coast in World War II.

• **Restoration**—Eastman House already had more than 700 films of its own before the Museum of Modern Art added about 14-million ft. of priceless historical film—including the complete works of D. W. Griffith and many Valentino, Garbo, and Fairbanks pictures. One of the major reasons for the merger was that the old prints, which have a nitrate film base, were deteriorating fast. Many had to be copied on acetate film.

Rochester has experts in the care of nitrate film, as well as facilities for storing and copying old movies. Eastman House itself has a \$100,000 fund for copying motion pictures—including the 9½-mm. and 28-mm. sizes which were popular during certain periods in Europe. They can't be projected in this country until copied on 16-mm. or 35-mm. film.

Card, who is in charge of the motion picture section, says that the collecting of these old films is almost as dramatic and humorous as the films themselves. Famous movie stars and their heirs have contributed many; some have turned up in the dusty offices of small town express agencies. Probably the most fantastic “find” was a long-sought print of John Barrymore in *Dr. Jekyll and Mr. Hyde*. Card discovered the film in the Eastman School of Music Library.

• **Part of a Trend**—Eastman Kodak doesn't want the museum to be considered its baby—even though it contributed \$300,000 to alter the mansion for a museum and plans to furnish the \$100,000 a year needed for operations. It prefers to think of it as an educational institution representative of the entire industry.

At Eastman House, officials say that actually it's part of a movement toward creation of specialized industrial museums, such as the one at Corning Glass. Other companies like du Pont and Ford are at least ankle-deep in the idea.



Here's the way The Upjohn Company, Kalamazoo, Michigan uses Swenson Spray Dryers to manufacture a preparation of proteins and carbohydrazes reinforced with vitamins.

OTHER WHITING PRODUCTS THAT MEET INDUSTRIES' NEEDS



Electric Chain Hoists



Trambeam Overhead Handling Systems



Drag Tables and Other Railroad Equipment



## What will they be drying next?

It could be your product! There's a lot of magic for any manufacturer in a process which gives products new form, wider markets, easier and *more profitable* merchandising. Pharmaceuticals, chemicals, "instant" coffee, dried milk and other foods . . . these are typical of the products that are being successfully processed in Swenson Spray Dryers.

Talk over this technique of drying with a Swenson engineer . . . for it is the *combination* of Swenson engineering and equipment which has helped so many processors to achieve better results and bigger profits!

**SWENSON EVAPORATOR COMPANY**

15661 Lathrop Avenue, Harvey, Illinois

*Evaporators • Spray Dryers • Crystallizers*

*Filters • Pulp Washers • Condensers*

# SWENSON

Proven Engineering for the Process Industries

SINCE 1899



# MANAGEMENT



## PSYCHOLOGICAL TESTING FOR WORKERS:

### Is Industry Buying a Fad?

This is the second in a series of articles on industry's use of psychology to fit the worker to the job. The first article appeared in the June 14 issue.

U.S. industry may be heading for the day when everybody from the floor sweeper to the president will recognize himself in the series of pictures above.

They show an employee sweating through one of the plethora of psychological tests that, theoretically, tell management how smart he is and in what things, whether he's an extrovert or an introvert, how much further he can develop, whether he's a leader or follower, or whether he can assemble big parts or little parts.

• **Green Fields**—These tests have opened up a rich new field for the once academic science of psychology.

Aptitude tests, now as common as weeds, have long been accepted by industry as valuable tools for personnel selection, training, and promotion. Thousands are published every year by such reputable companies as Psychological Corp., Science Research Associates, Inc., and Industrial Psychology, Inc. (BW-Jun.14'52,p102).

In addition to these and the standard general intelligence tests, industry is turning to more abstruse tests of personality. Management, some practitioners of industrial psychology claim, can gauge the temperament of its employees, and in that way judge where they can best dovetail into the organization. From a worker's interpretation of ink-bLOTS (the Rorschach test) or what he writes about a series of pictures (the Thematic Apperception

Test), management is told it can outguess the trial-and-error methods of the past.

• **Tests Unlimited**—The end isn't in sight. New psychological devices bob up almost every day. Recently G. Marian Kinget, a Belgian psychologist now at the University of Chicago, authored a book describing how she can analyze a person's temperament from pictures which a subject sketches starting from a few scrawls on a piece of paper.

Another is Activity Vector Analysis developed by a Rhode Island industrial psychologist, Walter V. Clarke. It has won enthusiasts in a batch of big companies. A person can take the test in 10 min., it is claimed. The subject selects from a group of adjectives those which he thinks describes himself; and



## PUZZLE:

### a pipe that grows...but doesn't change weight

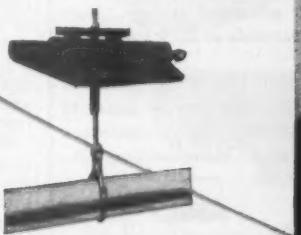
Heat a 100 foot length of steel pipe to 1000°F and it will expand 8.76 inches . . . but its weight will remain unchanged.

If this pipe were part of a complete piping system and the expansion were crowded back into the system, the resulting strains would be destructive. To prevent this, the pipe must be allowed to rise and fall with the expansion and contraction.

A unique type of hanger is needed. As the pipe moves up and down, the hangers must maintain the same lift, because the pipe weighs just as much hot as it does cold. The Grinnell Constant-Support Pipe Hanger solves this tricky problem. Like a tireless arm of steel, it

flexes as the pipe expands and contracts, yet its lift never varies.

The solution to this complicated piping problem of thermal movement is typical of the extent to which Grinnell goes to provide the products, facilities and engineering experience to solve any piping problem.



# GRINNELL

WHENEVER PIPING IS INVOLVED



Grinnell Company, Inc., Providence, Rhode Island

Coast-to-Coast Network of Branch Warehouses and Distributors

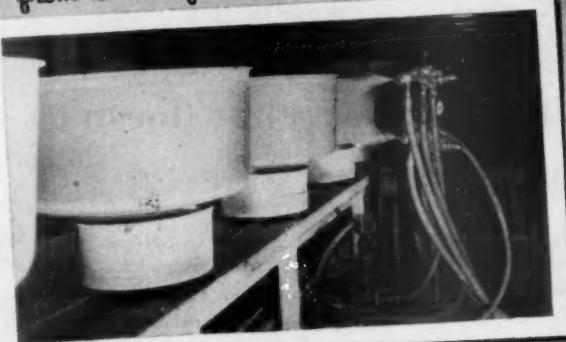
pipe and tube fittings • welding fittings • engineered pipe hangers and supports • Thermollar unit heaters • valves  
Grinnell-Saunders diaphragm valves • pipe • prefabricated piping • plumbing and heating specialties • water works supplies  
Industrial supplies • Grinnell automatic sprinkler fire protection systems • Amco air conditioning systems



industrial spray finishing equipment

engineered to your requirements

An actual case  
from Binks files



## Binks automatic spraying machine pays for itself in just one week!

After making a thorough study, we helped a Chicago manufacturer of washing machine tubs save 1800 pounds of costly porcelain enamel per 3-shift day by introducing automatic finishing equipment and lowering air pressures. Quality improved...the savings paid for the new equipment in one week.

This is the kind of economy that results when spray painting systems are properly specified and engineered. The spray application of paints and coatings is our business...has been for 50 years. During that time our Engineers have bumped into nearly every imaginable painting and coating problem...ranging from small manual operations to giant automatic set-ups...from applying the finest of product finishes to tar-like materials so thick you would never dream they could be sprayed.

This vast experience is yours to draw on without cost or obligation. A Binks Engineer will gladly call at your plant to discuss ways and means to improve the finishes you are now getting...to speed up your production...to lower your finishing costs. Just drop a note to: Binks Manufacturing Co., 3130-34 W. Carroll Ave., Chicago 12, Ill.

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from the same group those which he believes other people would apply to him. A few minutes later the analyst can spell out the person's temperament, relate it to the needs of a previously-analyzed job. Bachman Uxbridge Worsted Corp., for one, has been using it in all its hiring.

Today it isn't unusual for companies to put second- or third-level executives through test batteries to find out what makes them tick.

From all this it is apparent that growing numbers of management men are looking to psychology to solve problems they've struggled with intuitively before.

That raises a big question: Is management merely embracing another fad. Or is there solid evidence that out of all the ferment will come a new tool for shaping management policies?

### I. Practical Results

To the practical management man, there is a certain logic in using tests to find out what people can or can't do.

But the academician is very likely to raise his eyebrows at some of the applied psychology that management has bought in its effort to boost output, cut turnover, or generally keep workers satisfied with their jobs.

The Encyclopedia Britannica says this about the field: "Applied psychology has suffered probably more than other applied sciences from the practices of pretenders and charlatans."

• Still in Infancy—As a branch of applied psychology, industrial psychology probably suffers as much as or more than the rest. One reason: Industry often is notably gullible about new tricks.

But to the academician, the charlatans aren't the main complaint in much of today's industrial psychology. The experts have serious doubts that any but a few psychological test methods, as applied to industry, have been researched thoroughly enough to be accepted as scientific.

Management is partly to blame. It spends far too little on research, too often calls on psychology out of despair to solve a problem that has stumped its other experts. Take high turnover. Management may find no solution, then order psychological testing. If turnover drops, management is sold. Frequently it goes overboard. Such scanty evidence of effectiveness is hardly scientific enough for the academic psychologist.

Among the psychologists not in the industrial field, about the only tests that are wholeheartedly accepted today without validation are the proficiency tests—those used mainly for clerical jobs. Beyond that, the ability of testing—whether by aptitude batteries, person-

ability tests, or the like—to predict an employee's on-the-job performance is still highly suspect.

## II. What Makes a Test?

To earn the name, any test has to be reliable. That means scores of any group must show up much the same for the same individuals no matter how many times they take it.

Once reliability is established, the big problem is to be certain you know what the test results show. In industrial psychology, management wants to know if the test will prove a person can do a certain job. This is where validity enters. That simply means this: How do you know that because a person scores high on a test for blockcounting that he will perform well on, say, assembling engine parts?

• **Shaky Ground**—This is where many psychologists think the whole field is on shaky ground. They say an employee may be perfectly just in asking: "So I can't count blocks as fast as Joe. So what?" The academicians want a lot more research to prove that a high score on a test means anything when related to job performance.

L. V. Sargent, assistant professor of industrial psychology at Columbia University, puts it this way: "It is probable that the day will come when thousands of sound validation studies will have been completed and published and when enough will be known to proceed without further research. For the present, however, the realistic executive will either buy statistical research on his own problem, or stay away from testing altogether. Aptitude tests when tailor-made can contribute substantially."

This doesn't mean that tests can't be useful. Many of them are. But even in tests accepted as valid enough for practical use, the margin of error can be great in predicting the success of a single individual. If from a group of 100, you want to pick only five applicants for one job, tests can give a good guide. If the number to be hired is 75, chances of individual failures turning up are much greater.

## III. Another Stumbling Block

Running neck and neck with the task of gathering enough statistics to show that tests are valid is another big job for industrial psychology: to pin down some accurate measure of job performance. Without that, it is impossible to say whether a test accurately predicts success at work.

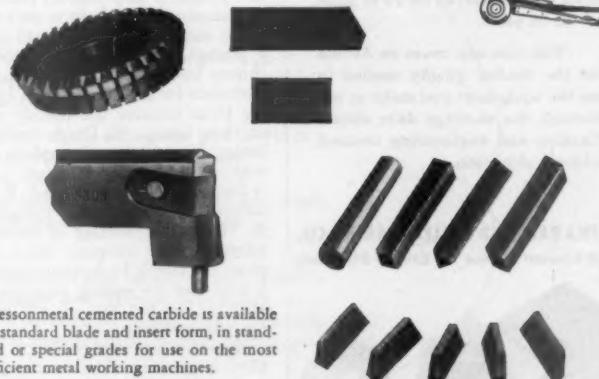
Where the job is routine and repetitive, performance is fairly easy to measure. But many jobs can't be measured by production or quality. However, up to now it is estimated that well over three-fourths of all

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studies in personnel selection have used performance ratings—the subjective judgment of superiors on a man's work—to gauge job success. That is a method that's far from being accurate or scientific. Yet it is often the only method psychologists have to measure whether their tests have been effective in picking the right person for the right job.

• **Few Guideposts**—In higher level industrial jobs, the problem is even greater. Industrial psychologists are still groping for the answer to such basic questions as: What are the traits of a good executive? Without the

answer, it is obviously impossible to devise scientific tests to measure those traits.

Even at the first-line supervisory level, there are few conclusive guideposts for measuring performance. Standard Oil Co. (N. J.), for instance, has spent months in research trying to pin down what makes a good supervisor.

It's because of this nebulous state of industrial psychology as it moves into the higher levels of management that the academicians caution against too much reliance on this comparatively new tool of management. It still needs a lot more basic research.

## Diversification Plus

By getting into the agricultural chemical field Deere & Co. is not only getting a new line but it's bolstering the farm-implement end of the business.

Next to International Harvester Co., Deere & Co. is the country's biggest manufacturer of farm implements. But unlike other big producers such as I-H and Allis-Chalmers Mfg. Co., it has never made anything but farm machinery.

Last week Deere took the big step. Stockholders O.K.'d a plant to go into agricultural chemicals. Deere will produce ammonia, urea, and urea ammonia liquor. All these chemicals are used to restore nitrogen to the soil.

• **Sitting Pretty**—There's nothing unusual in diversification. But by making agricultural chemicals, Deere puts itself in a peculiarly advantageous position.

The company is getting into a field which will do two things: (1) provide a product to be used by its farm-machinery customers; (2) strengthen these customers for farm implements by helping them preserve the fertility of soil on their farms. To Deere, fertile land means bigger sales of implements to work it and to harvest crops.

• **Growing Need**—As Lloyd F. Kennedy, vice-president and treasurer, put it: "There is a shortage of commercial nitrogen. The company hopes to improve the supply for fertilizer (ammonia is also used for making explosives). By so doing, we feel that we will be serving our customers. . . ."

Kennedy says the problem of fertility is growing. One reason is that modern-day crops such as hybrid corn deplete the soil much faster than older types. That's especially true of nitrogen. Conceivably, soil depleted of nitrogen could reduce the production of farm regions, such as cotton and tobacco lands. This would cut heavily into Deere implement sales.

• **Ideal Spot**—Deere will build its \$20-million plant in Pryor, Okla., right next

to the Grand River Dam Authority's steam plant (BW-May 10 '52, p. 158). There is an ample supply of natural gas and power there—the two raw materials, besides air and water, needed to produce ammonia products.

Even though this is a whole new field for Deere, it shouldn't mean too many management headaches. For one thing, the company in recent years has decentralized authority, giving branch and plant managers wide powers of decision. The company now has 16 plants, with headquarters in Moline, Ill., where six of the plants are located.

• **Up in the Air**—So far, management hasn't decided whether the chemical business will be a division or wholly-owned subsidiary. Either way it will operate on a decentralized basis.

On top of this, Deere decided from the beginning not to package products under its own name for wholesale or retail sale. Instead it will make the basic ingredients, sell them in bulk to the 40 or 50 large compounders of commercial fertilizers. Thus no special or elaborate sales or marketing organization will be necessary, always a problem when you start to diversify.

• **An Easy Time**—Deere thinks it won't have trouble selling what it produces from the 300-man Pryor plant. There is the general shortage of ammonia. In addition, only a small number of companies are making the relatively new but growing product urea. It is a nitrogenous compound synthesized from ammonia and carbon dioxide.

Deere's decision to diversify apparently had little to do with present trends in farm implement sales. Volume for the year ended last October was \$433-million. This year farm implements generally have been behind 1951, but Deere's second-quarter vol-



# Why is a self-threading needle like a jet engine?



**I**N APPEARANCE and purpose they are poles apart—the tiny self-threading sewing machine needle . . . and the mighty engine of the space-eating jet.

Yet manufacturers of trouble-saving needles and high-powered engines are faced with the same basic question—  
how best to join one piece of metal  
to another quickly, permanently.

The answer in each case is provided by the hard-to-believe versatility of resistance welding . . . a single, microscopic weld on the needle . . . rugged welds by the thousands to harness the tremendous forces of the jet engine.

Key to economical, high-speed mass production in many industries, resistance welding helps turn out tiny electronic tubes and 10-ton trailers . . . metal furniture, the farmer's plow . . . bazooka shells, cuff links, your automobile, even streamlined railroad trains.

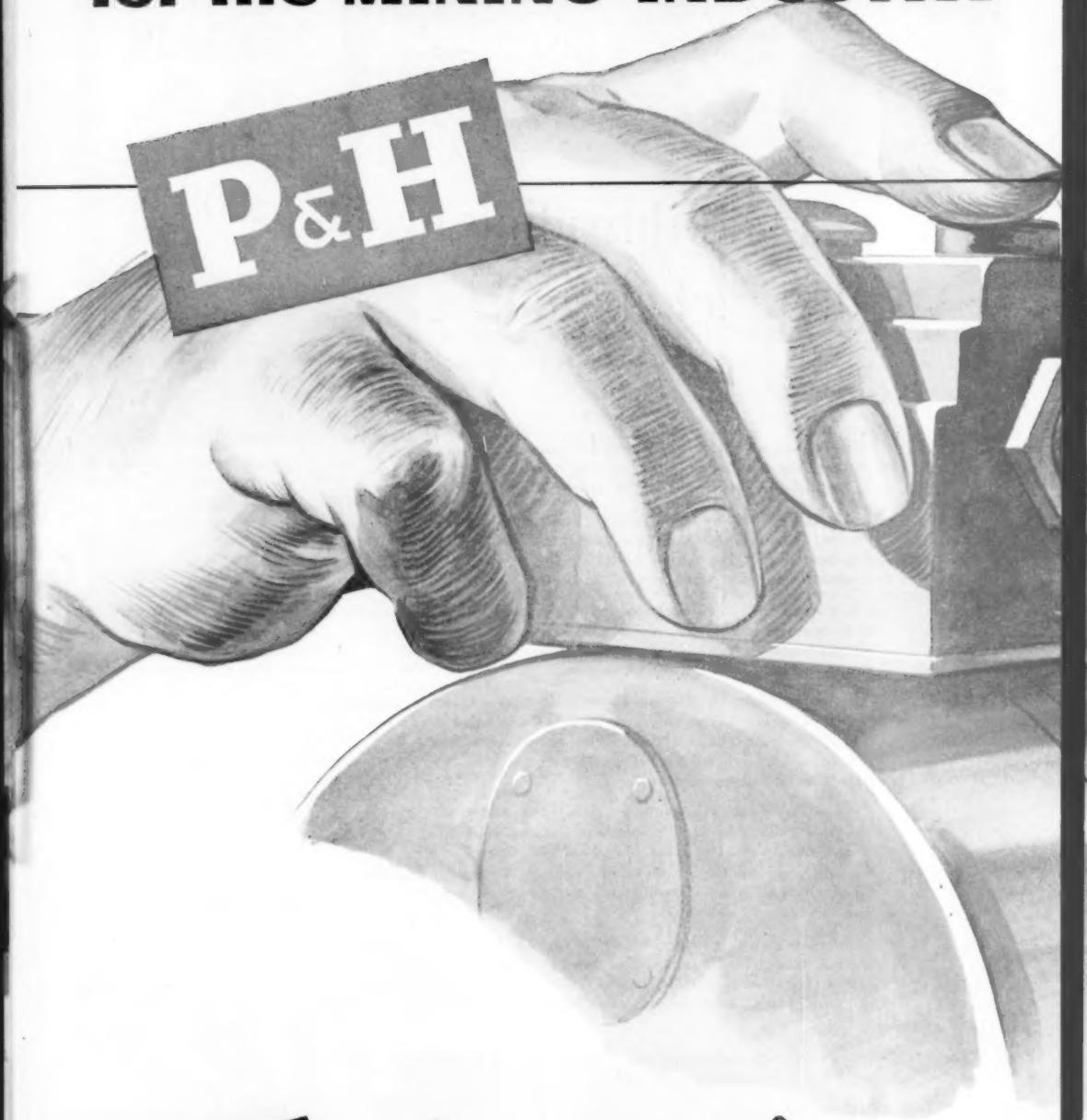
Ever-spreading use of resistance welding during the past 25 years has been spurred by Mallory development and production of an amazing array of special "tools of the trade" . . . new alloys and metals . . . dies and electrodes, both large and small, all of which have made possible stronger, more uniform, more economical welds.

Costs come down—product usefulness goes up—everybody benefits from such engineering development and precision production. It is a type of work Mallory is particularly well-equipped to handle not only in metallurgy but in electrochemistry and electronics as well.



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## One kind of crisis you don't HAVE to face in your business!



**Just today**, this man's wife has learned from the doctor that her husband is going to be laid up for a long, long time. The fractures he suffered in a car crash six months ago aren't knitting properly, and bone grafts must be made. Since he is a key man in his firm—the sales manager, in fact—his wife feels that his associates ought to know what the doctor has said. She's telephoning the office now . . .



**At the office**, the president gets the bad news. He knows now, since his sales force has had little direction for six months, that he will have to hire a new sales manager right away. But what about the disabled man whose worried wife is on the phone right now? Can they afford to continue his salary and pay for two sales managers? Or must they stop the pay that the disabled man and his family live on?

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ume was \$116-million, compared with \$129-million in 1950 and \$108-million in 1949. That makes it below 1951, but above the two previous years.

Though Deere is diversifying product-wise, management isn't. The company has largely been in the family ever since John Deere founded it in 1837 to make steel plows. The present top man is Col. Charles Deere Wiman, a great grandson of the founder. The Deere family still has a large stockholding, though by no means control. But it's a tradition to have a member of the Deere family as president, if possible.

### MANAGEMENT BRIEFS

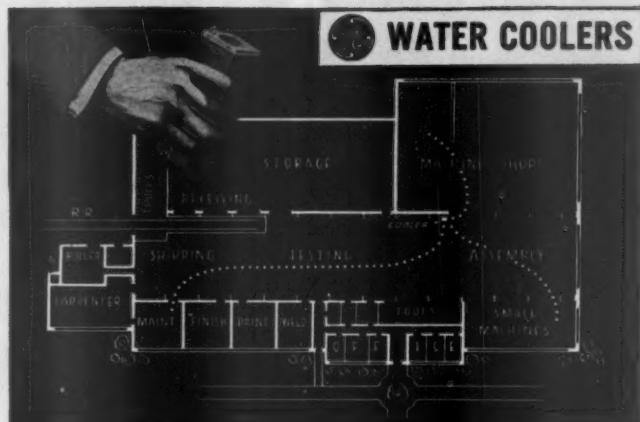
**International Harvester Co.** has opened its new \$600,000 industrial education building in Chicago. It houses Harvester's central school for all the company's education and training activities. In the past six years, more than 15,000 employees, dealers, and Harvester-connected students from 20 foreign countries have attended.

**Two top men** of the Citizens' Committee for the Hoover Report have set up business together in New York and Washington as consultants in public relations and government research, now that the committee has finally suspended its activities (BW-Jul.15'52, p48). Charles B. Coates, vice-chairman, and Robert L. L. McCormick, research director, will operate as Coates & McCormick, Inc.

**One out of six** companies listed on the New York Stock Exchange have given stock options to executives since the 1950 tax law change made them attractive as capital gains. This was reported by Arch Patton, executive incentive specialist for McKinsey & Co., management consultants.

**New president** of the Society for the Advancement of Management is Edward W. Jochim, general manager of the Chicago plant of Personal Products Corp., subsidiary of Johnson & Johnson.

**Charitable foundations** to handle company donations have been formed by two more corporations (BW-Jan.12'52, p66). They are the Leeds & Northrup Foundation, for Leeds & Northrup Co., and Food Fair Stores Foundation, set up by Food Fair Stores, Inc. Leeds & Northrup says its foundation will keep company donations on a steady plane during good and bad years. Food Fair feels business has to give more, thinks the foundations idea is the best way to do it.



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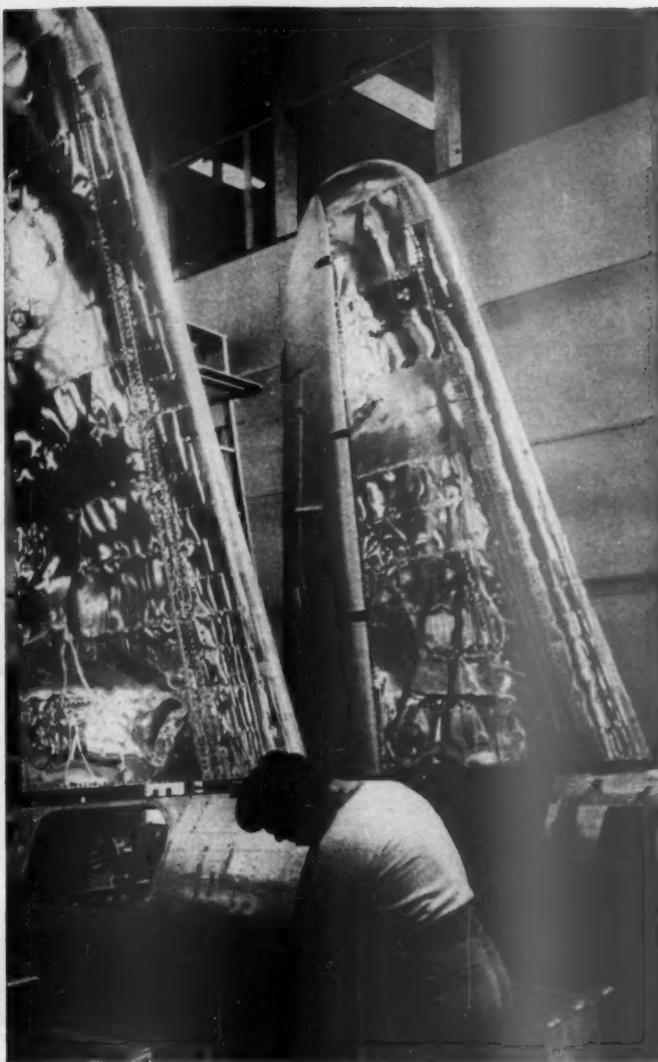
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SWITCH to production of cargo planes just after the government curtailed output of trainer planes in 1943 helped Fairchild keep out of the red.



DEVELOPMENT of the C-119H—a larger, improved version of the C-119—puts Fairchild still further ahead in the troop-carrying and military-cargo field.



PRESIDENT Richard S. Boutelle's contract for the Flying Boxcar read "all wood." But as wood got scarce, he began to substitute more and more aluminum until . . .



. . . finished plane had wood in pilot's seat only. As a result, Fairchild kept its contract for C-82 cargo planes when the Air Corps canceled other wooden-plane orders.



#### FAIRCHILD'S BOUTELLE IS

## Banking on Flying Boxcars

In the very middle of World War II, when most of the aircraft industry was rolling in orders, Fairchild Engine & Airplane Corp. missed a beat. The government suddenly cut back its orders for trainer planes. Fairchild, which had specialized in trainers, found its sales and production dropping alarmingly.

But Richard S. Boutelle—then vice-president and general manager of the aircraft division—had an ace up his sleeve. That ace set Fairchild up for a period of postwar growth that a lot of other aircraft companies have envied.

When the trainer cutback came through, Fairchild hastily concentrated on the development of military cargo planes. As a result of that concentration, employment in Fairchild's air-

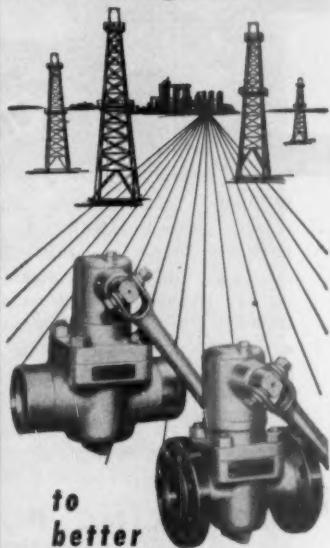
craft division is now above the 1943 World War II peak, and is rising steadily. Net income in 1950 was 69% above the 1943 World War II peak. It dropped last year—despite much larger gross—but it was still 22% ahead of 1943.

• **Fairchild's Answer**—Boutelle's "ace" was a completely new type of plane—the first plane designed specifically for transportation of troops and military cargo.

Development of this plane, the C-82, and construction of the first prototype, had been going on through 1942 and 1943, but the first production model wasn't delivered to the Air Force until May, 1945.

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FAIRCHILD'S publicity department uses a pun to promote the Flying Boxcar.

faster. By December, 1945, a total of nine production airplanes were delivered. By April, 1946, production was up to eight a month.

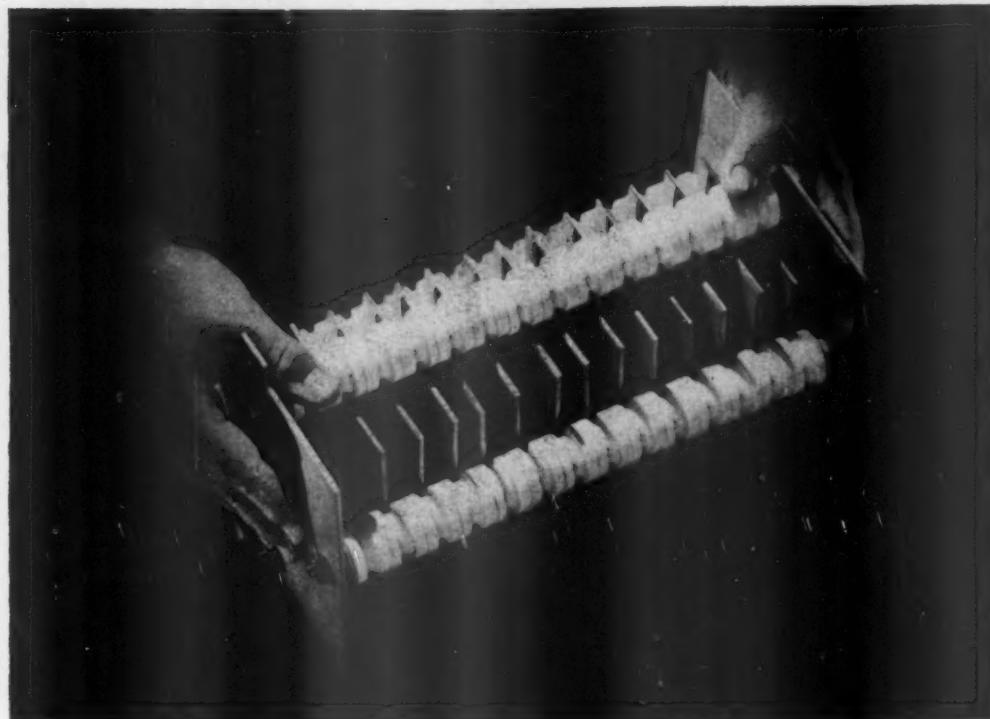
Since then, the specialized cargo plane has become an integral part of Air Force tactical planning. And output of the C-82 and its successor, the C-119, has risen steadily. Some 220 C-82s were delivered before that model was discontinued. From Mar. 28, 1949, when the first one was delivered, through last week, Fairchild has produced 370 C-119s. And Fairchild is one of the few companies in the airframe industry that has not dipped into red ink even once since the war.

### I. From Camera to Plane

The fact that Fairchild is producing airplanes at all is really an accident. Sherman M. Fairchild's original interest was in aerial photography, and in 1920 he formed the Fairchild Aerial Camera Corp. (now Fairchild Camera & Instrument Corp.) to develop and manufacture a good aerial camera.

By 1925 he had what he figured was a good camera, but he couldn't find a plane that he thought did it justice. So he set up a subsidiary corporation to develop aircraft better suited for aerial photography. To widen its market, this subsidiary started producing personal planes for the general market, and also went into the manufacture of airplane engines.

By the mid-30s, the aerial camera part of the business was fairly profitable. But the aircraft and engine divisions were consistently losing money. So, late in 1936, the stockholders decided to separate the unprofitable plane and engine interests of the company from the profitable camera and aerial survey



## Steel guinea pig about to have a breakdown

● We've come a long way toward licking the No. 1 enemy of steel—corrosion.

At United States Steel, for example, we've learned a lot through exposure tests, equipment service trials, accelerated laboratory tests, and the like. But there's just one way to be sure which grade of steel will give the longest service per dollar of cost on any given job: *try it under actual operating conditions.*

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most economical steel for that particular service. To our way of thinking, this is the most accurate way to decide what grade of steel is the best buy for a particular installation.

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office planning, write for  
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**METAL OFFICE FURNITURE COMPANY**  
GRAND RAPIDS, MICHIGAN

## "...Boutelle worked closely with the Air Corps and the Ground Forces . . ."

FAIRCHILD starts on p. 92

interests. Since then, the Fairchild Engine & Airplane Corp. has been an entirely separate and independent company.

For a while, the new plane corporation continued to lose money. But in 1939, a Fairchild trainer won an Air Corps competition and a \$1.6-million production contract. And the company started an unbroken succession of profitable years.

• **New Faces**—When the original corporation was split up in 1936, Fairchild put someone else in charge of the camera corporation and took over active management of the plane company himself.

But Fairchild himself has always been more interested in the development and promotion of products and corporations than he has in the day-to-day management of any one operation. And Smith, Barney & Co., which loaned Fairchild money for expansion in 1939, wasn't too happy about the corporation being run as a one-man show. As a result, Fairchild went out looking for an executive assistant.

The man he finally found was J. Carlton Ward, who had just left a job as vice-president of United Aircraft in charge of the Pratt & Whitney division. Ward took over as president in mid-1940, and Fairchild moved up to chairman of the board.

Early in 1941 the company obtained the release of Major Richard S. Boutelle, then serving in the Plans Division of the Office of the Chief of the Air Corps. It installed him as assistant to F. A. Galligan, vice-president of the corporation and general manager of the aviation division at Hagerstown, Md. Three months later, Galligan died, and Boutelle stepped into his boots.

### II. On the Way

All this time, the company was expanding rapidly. When it got the first trainer contract in 1939, the aircraft division had only a small plant in Hagerstown, with about 150 employees. Under the government's Emergency Plant Facilities program, it added three new buildings. Employment rose to a high of 8,250 in 1943.

Production of training planes reached its peak in mid-1943, then tapered off. In April, 1944, Fairchild delivered the last one—the 5,048th—to the Air Corps. But by this time, the company was well advanced on its plans for the C-82 Flying Boxcar. Originally, the new plane

was scheduled to be all-wood. But wood was getting scarce; and aluminum was getting easier. So Boutelle began to substitute—to the point where he told Sherman Fairchild one day that this "all-wood" plane might have a little wood in the pilots' seats.

• **Lucky Break**—That turned out to be a good thing. The Air Corps, disillusioned with wooden planes, canceled all contracts for them. Fairchild, on showing that it really had a metal plane, kept its contract.

The first production C-82 wasn't delivered until after VE-day. Yet the contract was not canceled. That was largely due to the fact that Boutelle had worked closely with both the Air Corps and the Army Ground Forces, to find out exactly what the military wanted. The same philosophy guided the development of the C-82's successor, the larger, faster C-19.

• **New Models**—The same philosophy also guided the company in the design of its two newest planes—the C-119H, unveiled last month, and the XC-120. The 119H (picture, page 92) is a larger, improved version of the 119. It has a 33% longer range, and needs 25% less runway to land than its older brother, which makes it ideal for operations close to the front lines. And it carries all its gasoline in external tanks slung under the wings, which makes it far less susceptible to fire.

The XC-120 is a completely new type of plane—a flying fuselage with a detachable cargo pod. The fuselage was designed to allow the pod to open at both ends, which permits loading or unloading from either end. To go with the 120, Fairchild has also designed what it calls a "roadable pod"—a cargo compartment on wheels, which can be hooked onto a truck-tractor and hauled off down the highway.

• **Internal Strife**—Ward did a good job with the company after he took over. Nevertheless, he and Sherman Fairchild soon found they didn't get along too well. Eventually Fairchild had to decide whether to let the divided authority and constant arguments go on, or to let the company continue under a single authority even though he disagreed with it. He chose the latter course, and late in 1946 resigned as a director.

The peace lasted less than three years. Early in 1949, the Fairchild board of directors voted Ward a long-term employment contract at a high salary plus a \$32,500 pension for life. Sherman Fairchild, who had kept the 100,000-odd shares which made him by far the company's largest stockholder, jumped right back in with both feet, and a bitter proxy battle ensued. Boutelle and Arthur F. Flood, then controller of the aircraft division, sided with Fairchild, and, though Ward

couldn't fire them, he barred them from the plant.

When the smoke cleared, the Fairchild group had won by 2 to 1. Ward and his directors were out. Flood was controller and vice-president (today executive vice-president). Boutelle was president.

### III. Korea—and Expansion

When the Korean war broke out, Boutelle was ready for it. There was room to increase output at Hagerstown. And he had plans all drawn up to take over the idle war-surplus Douglas bomber plant in Chicago and convert it to manufacture of C-119s. All in all, he could triple production if he had to.

It didn't work out that way. On Dec. 3, 1950, Henry J. Kaiser arrived at Hagerstown and informed Boutelle that he had been chosen to build 119s at Willow Run. Boutelle objected, but got nowhere. The Air Force told him not only that Kaiser had the contract, but that Hagerstown output would not be increased, and that Kaiser would eventually be turning out more 119s than Fairchild itself.

The 119 had been developed under an Air Force contract, and the Air Force had a right to choose any manufacturer it wanted. So Boutelle gave in, and agreed to give Kaiser all the technical assistance he needed to get into the aircraft business.

• **Rebellion**—Three months later, Kaiser announced the purchase of a controlling interest in Chase Aircraft Co., maker of a competing cargo, the C-123. Boutelle stormed down to Washington to say that he was damned if he would teach his competition the know-how of producing aircraft.

The Air Force got the point. It told Boutelle that it would let Kaiser complete his contract for 119s (190 of them), but would not give him any more. It gave Boutelle the go-ahead on the Chicago plant. And it approved a \$7-million expansion at Hagerstown.

Fairchild spent a good bit of time and government money preparing the Chicago plant. When the stretchout became official government policy last January, the Chicago plant was an early casualty. The Hagerstown deal was not hit, and should be completed by the end of this year.

### IV. Many Irons in Fire

The aircraft division at Hagerstown is only a part of the over-all Fairchild organization—although it produces about two-thirds of the income.

Most important of the smaller divisions is the engine division. Perhaps its biggest job today is subcontract work on the General Electric J-47 jet engine. Its own J-44, a smaller jet, with about



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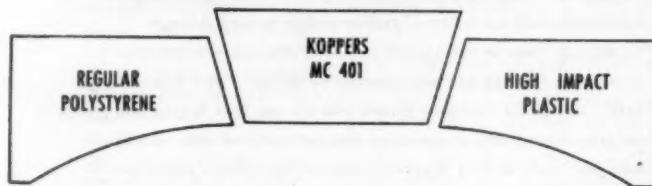
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*... Fairchild didn't get the contract. GE was chosen instead . . .*

FAIRCHILD starts on p. 92

1,000 lb. thrust, it is now producing as a powerplant for guided missiles. When military demand lets up, Fairchild plans to develop this engine as a special take-off boost for commercial airliners. The engine division also handles Fairchild's Al-Fin process—a patented method of bonding aluminum molecularly to ferrous metals.

Other divisions include the guided missile division, which is turning out a ground-to-air missile for all three services, and the Stratos division, which makes pressurizing and air-conditioning equipment for both military and commercial planes.

• **Atomic Energy Blowup**—Up to two years ago, Fairchild had another division. But this NEPA division (Nuclear Energy for the Propulsion of Aircraft), is now defunct. Here's what happened:

In 1945, when information on atomic energy first became public property, Ward got interested in its possibilities for powering planes. He asked the government to let Fairchild look into it. But the Atomic Energy Commission preferred a cautious approach to civilian uses. And the Navy wanted all efforts directed to an atomic submarine.

Ward and the Air Force got the contract through. But it had no priority whatever on atomic personnel. Fairchild was strictly forbidden to raid other atomic projects for experienced men.

Despite these handicaps, Fairchild did the job. It filed a report saying, in effect: "This definitely looks feasible. Now let us go ahead with a larger contract, to design a pilot model of an atomic aircraft engine." This was something the Air Force couldn't do alone. It had to get approval of the Joint Chiefs of Staff and AEC. There the thing stalled for more than a year.

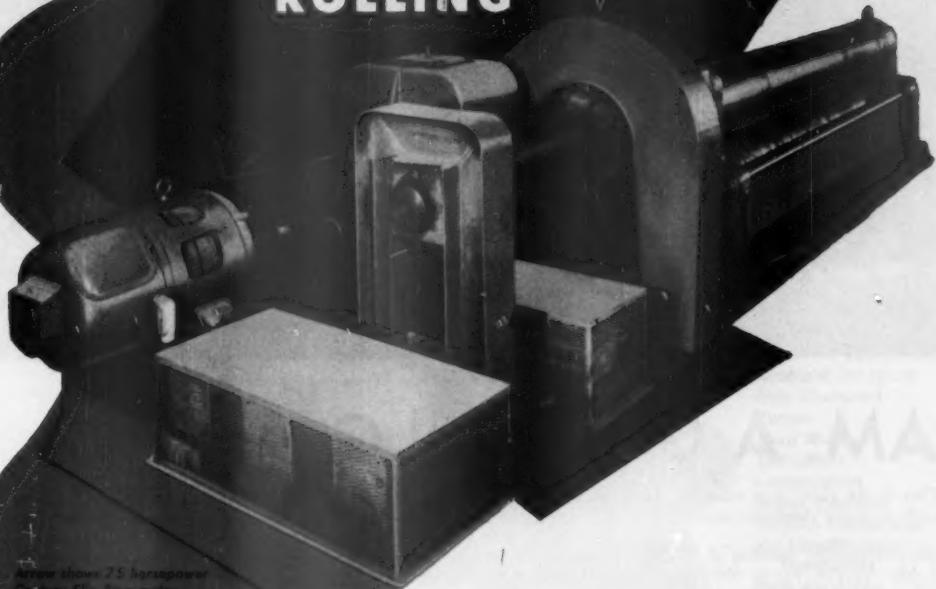
In 1950, the project was approved. But Fairchild didn't get the contract. General Electric was chosen instead to handle the next stage of NEPA development.

• **Clear Sailing**—Since NEPA was on a strictly nonprofit basis, its loss, although a blow to Fairchild's pride, didn't affect its pocketbook.

On the future—and from the pocketbook angle—Boutelle is very sanguine. He feels Fairchild is sitting pretty, with its cargo planes—which may have a big peacetime potential—its engines, and its guided missiles. In addition, Fairchild last week signed an agreement with Fokker Aircraft Corp. of Amsterdam, Holland, to build S-14 jet trainers.

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# LABOR



YOUNG AND OLD men and ideas work together in a fast-moving, far-reaching union. It's . . .

## IAM: A Giant Still Growing

This is the third in a series of appraisals of major American unions.

On a seven-story building at 9th St. and Mt. Vernon Pl. in Washington there's a colored neon sign worked into a huge calipers and square. Barkers in the rubberneck buses full of tourists have been known to identify the place as headquarters for some mystical Masonic order. They're dead wrong. It's the home office of the fourth largest labor union in America, the Inter-

national Assn. of Machinists (AFL).

The trade-fraternity symbols hark back to a time when secrecy was a requisite for union survival. Then, a local union was a "lodge," and "lodge" it remains in the IAM, though today the Machinists are one of the most modern-minded of U.S. unions.

### I. Power in Many Fields

Machinists are employed in every metal-working industry. IAM claims

it's the largest union in machine tools, business machines, aircraft, auto repair shops, airlines, printing-press production, and the civilian end of the government. It's still one of the major unions in the industry where it got its start—the railroads. IAM has contracts covering shop employees with every Class I road in America except the Pennsylvania.

• Aircraft—Biggest of all its fields today, however, is aircraft. The Bureau of Labor Statistics recently reported that nearly 70% of all aircraft workers belong to IAM. Out of the union's total membership of 750,000-plus, 271,000 are aircraft workers.

Among the major plane producers under IAM contract are Boeing, Lockheed, and Consolidated Vultee. Even where IAM isn't the dominant group, it frequently has control of the key workers in a plant.

At General Electric's jet engine plant in Lockland, Ohio, CIO's United Auto Workers—IAM's chief rival in aircraft—has some 3,000 production workers. IAM has about 800 maintenance machinists and toolroom employees. Both unions have contract disputes at the same time, and both take strike votes.

After long and fruitless negotiations and mediation sessions, IAM called its

## LABOR

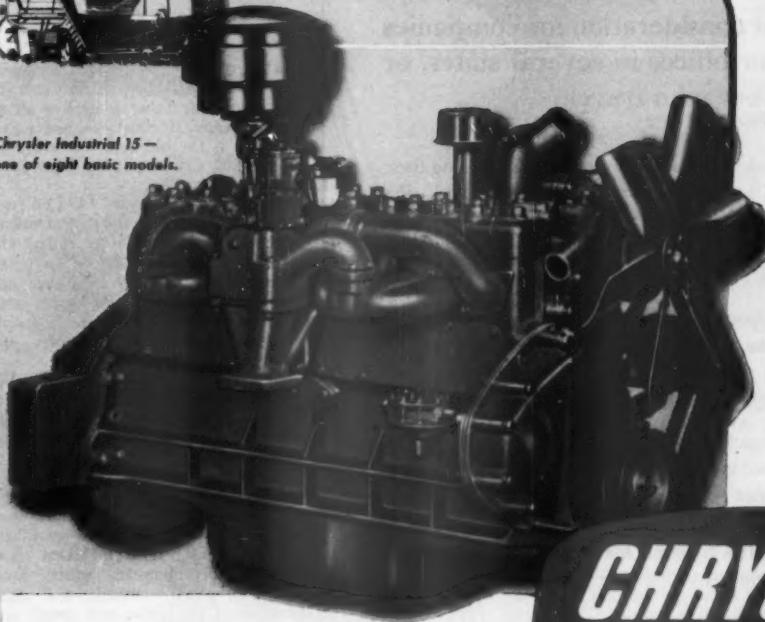
→ IAM, 4th largest, widest scattered U.S. union:	
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men out, and the plant was forced to shut down even though UAW hadn't called a strike. GE finally got an injunction against the union, and the plant reopened. This week, the unions and the company are still working to settle the dispute.

The GE case is a typical example of a major source of IAM bargaining strength. While much of its membership is on a plantwide basis, machine-shop and maintenance men in practically all metal-working industries are IAM members.

• **Wheel Horses**—No plant can operate long without them. The basic machinists—the men who make things out of metal the way a carpenter shapes objects from wood—are the backbone of the union, and have been from its start. They number about half of IAM's membership today.

The other half of its dues payers are production, technical, and clerical workers in plants where it represents everybody. At Boeing in Seattle, for instance, the 40 nurses in the plant's medical department are IAM members.

• **Not Type**—Clearly, IAM can't be pigeonholed as either a craft or an industrial union. It illustrates how pointless now is the old craft vs. industrial union fight which split the U. S. labor movement.

The men who founded IAM 64 years ago were railroad shop machinists, highly-skilled craftsmen. Today, the union's jurisdiction puts it in everything involving metal working, and lately even into metal substitutes such as plastics. But it has retained all its old claims on machinists, machinery, and machine repairs.

As a result, IAM straddles all kinds of jurisdictional lines and appears in every industry imaginable. Though UAW is by far the dominant group in automobiles, IAM has organized an entire auto assembly plant on the West Coast. CIO and AFL both have textile workers' unions, but IAM men maintain and repair textile machinery in many mills. IAM members make razors, blades, bicycles, lathes, X-ray machines, pharmaceuticals, and much more. And the union will spread into any other industry that hasn't been staked out by somebody else.

Its organizing approach has been to get machinists, toolroom men, and technicians first. Then, if it can, it spreads out from a craft to an industrial union. In the end it may even wind up bargaining for nurses and sweepers.

• **Traditional Trouble**—This kind of craft and industrial combination has made problems for many unions. Skilled workers are reluctant to admit unskilled production men to their unions for fear their own influence as key men will be watered down. And production workers

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The men shown here are operating the latest model of the gauge in a laboratory. This is a highly accurate gauge that can measure quickly with X-rays the thickness of the tin on sample tinplate sheets taken from any of the production lines, electrolytic or hot-dip, at J&L's Aliquippa, Pa., plant.

Another gauge, operating on the same principle, is installed on the continuous electrolytic tinning lines at Aliquippa, giving a constant check on the tinplate.

Here's the secret of the amazing gauges: X-rays of a certain wave length will cause fluorescence in the steel sheet, but not in the tin coating. Some of the fluorescence will be absorbed in the coating, the amount depending on its thickness. X-rays are shot at the tinplate, and the resulting fluorescence is measured, giving a reading that tells the thickness of the tin coating.

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don't relish the idea of striking to get higher wages for a handful of craftsmen.

AFL's electrical workers have tried to solve the problem by setting up grades of membership, with skilled craftsmen paying higher dues in return for more voting rights and benefits. UAW has met dissatisfaction among its tool and die makers by establishing separate councils in regions and in large industrial locals. Neither system has completely solved the problem.

• **IAM Approach**—IAM boasts that it has no second-class members; everybody is on an equal footing. Local and district lodges in industrial plants include both skilled and unskilled employees. Union policy has generally been to retain the support of the craftsmen by selling production workers the idea of fighting for everybody's demands, even when it means a walkout to get somebody else a wage boost. Where possible, though, skilled craftsmen are placed in separate groups.

## II. Up From the Grassroots

The 1,900 local lodges are the basic IAM structural unit, though the district lodge—composed of locals—is frequently the basic bargaining group.

A single shop may have a local lodge of its own. Or workers from several shops may have one local lodge. In a large industrial plant, there may be a local for each major department, for a special craft, or for each shift. Such a plant would probably have its own district lodge.

• **Flexible Lines**—The 158 district lodges are organized on geographic or corporate lines, depending on what's the handiest way to do business. The district lodge is the business end of the union. It employs the business representatives who do the negotiating. The grand lodge (other unions call it the international union) pays up to half of the first \$500 per month of a business agent's salary. Local lodges pay the rest.

This flexible system allows IAM to coordinate companywide and areawide bargaining drives despite the multitude of local lodges involved.

• **Hierarchy**—District lodges are organized into seven territories, six for the U. S. and one for Canada. Each territory is headed by a general vice-president. Another v-p in a Chicago office is the top coordinator for all the railroads under IAM contracts.

Once a year the eight veeps come to Washington to meet with the international president, the resident vice-president, and the general secretary-treasurer. Together they make up the executive council; between council meetings, the three Washington officials administer the grand lodge.

IAM prides itself on its democratic system; control works up from the bot-



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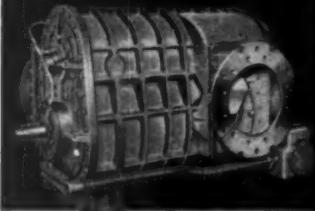
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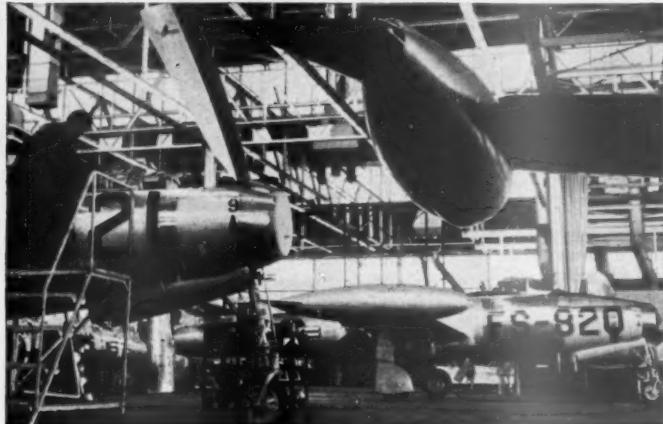
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**CRAFT** organization provides a hard core of skilled, high-paid membership in IAM. Half of the union's dues payers are still drawn from this group of workers.



**INDUSTRIAL** union type of structure comes in the big shops that IAM has signed from top to bottom, especially in aircraft plants like Republic Aviation Corp. (above), in machine tool makers, and elsewhere. This membership has given the union a great supply of new strength since 1936 when IAM signed its first contract with Boeing. IAM often organizes craftsmen in a plant first, uses them as a wedge to make further gains, finally signs the whole work force. This policy has broken down many of the barriers between craft and industrial unionism.



PRESIDENT Al Hayes sets IAM's soft-spoken but firm pace in bargaining.



NO. 2 MAN is Washington vice-president Elmer Walker, labor member of WSB.

tom. Local lodges elect their own 11 officers, also elect district delegates to work with business agents. Rank-and-filers are encouraged to propose contract terms, and no agreement can be put in effect without their approval.

• **On National Level**—Every four years, officers are called to account before the IAM's national convention. Unlike the tightly controlled conventions of some unions, this convention gives every delegate a chance to say what he likes, to make proposals, and to call for votes on them.

Any member in good standing for five years is eligible for national office. The election system works this way: A would-be candidate solicits members by mail asking for their endorsement. On a specified date, local lodges vote to endorse candidates. The two receiving the most local endorsements go on the ballot.

• **New Blood**—Officers generally hold office as long as they like—members usually reelect incumbents. But there's one restriction—everybody retires at 65, whether he has finished his term or not. This has eliminated another characteristic of the older unions: rule by a group of ancient officials who hold office until they can pass it to their self-chosen heirs.

IAM's current international president, Al Hayes, is only 51, and several members of the executive council are younger. Almost no officials or staff members of the union are in their 60's.

### III. How It Grew

In many ways, IAM is an anomaly among unions of its age and type. It was founded by a group of railroad shop machinists in the secrecy of a pit under a locomotive in 1888 in Atlanta, Ga. Word of the union was spread by the "boomers," machinists who traveled around the country from one shop to another.

In the early days, it was strictly a craft union, with all the trappings of a secret order. For years its president carried the awesome title of Grand Master Machinist. To this day, its constitution is a secret document, for members only.

• **Righting Wrongs**—At the same time, IAM is considered one of the most progressive, enlightened unions in America. It won't tolerate corruption.

The executive council moved fast during the war when two business agents gained control of San Francisco Local Lodge 68 and built a small empire by pressuring employers. The council called a special meeting in San Francisco, turned the culprits out of office, and generally went about righting all the wrongs.

The council even went a bit further than many other unions would have dared. It agreed to permit employers

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**FREE SURVEY:** A RUST-OLEUM specialist will gladly survey your rust problems. He'll make specific tests and recommendations. No cost or obligation. See Sweets for catalog and nearest RUST-OLEUM distributor, or write for literature on your company letterhead.



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 Have a Qualified Representative Call  
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 Look for this label—be sure it's genuine  
RUST-OLEUM

**"...They concede that they don't like work stoppages**

...

**IAM PROFILE** starts on p. 100

who had been blackjacked into granting out-of-line wage boosts to cut their wages back to levels prevailing among other shops in the area.

• **Too Soft?**—For permitting that kind of thing, the union has been called soft-headed and employer-controlled. Its rivals have accused IAM of undercutting them, settling for too little, and thus harming all organized labor (BW—Jun.14'52,p152). But a closer look at the machinists' bargaining policy and history gives a different picture.

• **The Velvet Glove**—Skillful negotiations, not shows of power, have been the union's basic method. Good relations with fair employers are a byword.

At Douglas Aircraft Co., both IAM and UAW have plants under contract. While UAW was refusing in 1951 to settle wage issues because of failure to agree on a retroactive date, the machinists negotiated three separate raises totaling 25¢ an hour. IAM worked quietly, leaving the door open each time it settled. In the end, IAM plant employees went home with more money.

• **Prefer to Settle**—IAM people don't like to be accused of fearing strikes to the point where they will do anything to avoid them. They concede readily that they don't like work stoppages. They admit that official policy requires that the Federal Mediation and Conciliation Service be called into a dispute before the executive council will O.K. a walkout. (A strike without the council's sanction means loss of grand lodge strike donations, which average about \$10 a week per striker.)

The machinists maintain that they settle more than 99% of all contract negotiations without walkouts. They explain it as a result of skill in negotiating.

• **Making Friends**—IAM doesn't try to hide the fact that it gets along well with many of its employers. The union's weekly newspaper, the *Machinist*, is among the showpieces of labor journalism. But it frequently runs big spreads on employers and their products, some of them obvious plugs. And when Schick, Inc., an IAM company, got in trouble in 1949 because sales of its electric shavers were falling off, the union plugged them in the *Machinist*, in daily newspapers, and on the radio (BW—Dec.17'49,p96). It figured that a company in trouble meant a plant full of union members in trouble.

• **Merit Raises**—UAW and other unions often criticize IAM's failure al-

ways to bargain for automatic wage increases all the way up the scale. IAM sometimes settles for automatic progression at the start, with merit raises after an employee reaches a certain level.

UAW claims its way guarantees its members higher pay than IAM. But the machinists disagree. Where they have especially good relations with a company, they agree to considerable use of merit boosts—but only if they are sure they will get a square deal. They point to an average wage for IAM members of just under \$2 an hour as proof that they have done pretty well by their dues payers.

#### IV. Plenty of Fight

There's another answer to charges that IAM is soft. The machinists' union has fought some of the toughest strike battles in labor history.

In 1901, the young union demanded a 9-hour day from contract shops belonging to the National Metal Trades Assn. An agreement had already been reached, but NMTA decided to use the issue as a means of destroying the union. So it reneged on its previous agreement, and threatened to expel any member plant that signed a union contract.

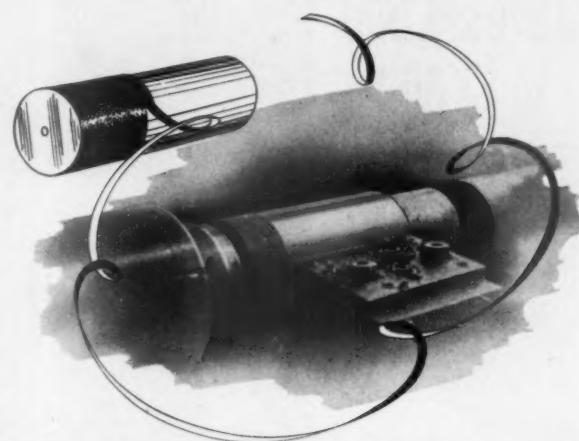
The union struck, and it took four months to get any shop to sign. Union members were blacklisted throughout the industry. The strike was never really settled. The union fought as best it could, signing a shop or two at a time, while NMTA threw each signed shop out of the group. The association never really quit; it gradually withered away as an antiunion organization, though it did succeed in keeping IAM out of much of the metal-working industry for years.

In 1922, IAM's 79,000 members in railroad shops joined other railroad unions in a nationwide strike against a wage-cutting policy of the roads. The roads settled a few at a time, but many of them blacklisted machinists for life.

In the 1930's, the machinists fought a running battle against the Mohawk Valley Formula developed by Remington Rand Corp.—a union-resisting program which became a curse word to organized labor. Rem-Rand is now an IAM shop.

• **Inter-Union**—Rival unions don't push IAM around either. In 1948-1949, the machinists fought attempts by Dave Beck, West Coast teamsters' union leader, to take over the Boeing plant in Seattle, Beck's stronghold. IAM finally won an NLRB vote and held onto the plant.

The machinists have also been fighting the AFL carpenters, operating engineers, and other building trades unions over the right to install and operate machinery. As a result of this



## *A chip off the cold block*

The most important thing about a good tube is the metal used to make the tube. Quality in tube starts with the casting of the metal itself.

Even in the best casting practice, there may be flaws concealed underneath the outside surface. But Wolverine makes sure that none gets into the tube.

As each billet comes from the furnace, it is cut up into blocks, each of prescribed size to make a base tube length.

At this point a vital inspection takes place. Before we can make the inspection, however, we first remove the rough outside skin by scalping the block so we can see the clean metal.

This enables us to make certain that no imperfections will be allowed to pass this step and enter the extrusion stage. Thus, none get into the final tube. That's your first assurance of quality.

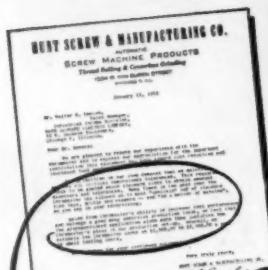
With such close inspection of every block, right at the very outset of the forming of the tube, you can feel confident that every foot of Wolverine tube you buy will be of uniform, top quality.

This, understand, is the forerunner of many more inspections which follow through the successive steps of Wolverine tube manufacture to bring you the finest seamless, nonferrous tube that specialized equipment and expert workmanship can produce.

**WOLVERINE TUBE DIVISION, Calumet and Hecla Consolidated Copper Company, Inc., producers of quality controlled tubing for refrigeration, processing industries, plumbing, heating and air-conditioning, automotive and aviation—1469 Central Avenue, Detroit 9, Michigan.**



# "Saves \$1,500 to \$2,000 in small tool costs"



"The production in our shop demands that we maintain extreme and critical dimensional tolerances. This requires tools to be plated above standard sizes to obtain unusual diameters and tolerances. Many times in the past year the Chromaster has allowed us to make 'specials' out of standard size taps, drills and reamers—and 'in a matter of minutes'. Over-all, we estimate the Chromaster saves us \$1,500.00 to \$2,000.00 a year in small tooling costs."

writes E. G. Dowell, General Manager,  
Hunt Screw & Manufacturing Co., Chicago, Ill.

Other users are increasing their production and profits with this simple, fast, low-cost industrial chrome plating process.

#### A Large Automotive Axle Company Reports:

"Using a Chromasol plated tap with 3½ minutes plating, we are now averaging 6,800 holes per set of taps for banjo housings. This has more than doubled our former 3,000 holes per set of 7/16-14 high-speed commercial ground taps."

#### An Electric Motor Manufacturer Says:

"We have been able to correct manufacturing errors by Chromasol plating to salvage one hundred electric motor shafts otherwise rejected as undersize."

#### A Manufacturer of Plumbing Fixtures Says:

"Chromasol plating has increased the life of our 8-32 machine screw tap, used in tapping a plumbing fixture, from 1,000 pieces to 6,000 pieces."

#### A Pump Manufacturer Says:

"Our deliveries of small pumps for the oil



Here's how one manufacturer cuts costs and increases tool performance by using a Chromaster industrial chrome plating unit right in his own plant.

industry have been speeded as much as five days by depositing .0002" to .0005" Chromasol plate on shafts that would otherwise have been scrapped or sent out to a commercial chrome plating company. This operation in one instance permitted a \$16,000 pump unit to be put into operation immediately."

There's reason after reason for installing Chromaster in your plant. It can mean dollars to you in increased production, minimized set-up and down-time on your machine tool operation. Normal life of your cutting tools and wear parts can be multiplied three to ten times by this amazing new and simplified method of chrome plating. 3½ minutes for the average job. There's a size Chromaster for every shop.

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row, IAM has been in and out of the AFL.

At present, the machinists' relations with the federation are at best uneasy (BW-Jun.7'52,p145). IAM is getting ready to pull out of AFL's metal trades department. It has never even been admitted to the building trades department. But even while it was out of the AFL, the union maintained close relations with state and local AFL groups.

• Politics—In politics, too, IAM has fought back when it felt it was being pushed around. In its early days, IAM leadership was largely socialist. The union supported the Plumb Plan, which detailed a system of government ownership for the railroads, and in the election of 1924 it endorsed the La Follette Progressive Party.

In 1926, however, Arthur O. Wharton became president. From then till his retirement in 1938, he steadily turned the union away from politics and toward a conservative trade-union policy.

• Fought CIO—It has been said that if someone other than Wharton had been president during the 1930's, IAM might have gone over to the CIO when it was formed. IAM itself had already become pretty much an industrial union in many of its plants. But Wharton fought the CIO and industrial unionism even while he was getting permission from AFL to move into the aircraft industry on an industrial basis in 1935.

By and large, IAM was out of politics in the Wharton era, though it endorsed F. D. R. in 1936 and 1940 and has generally taken a New-Fair Deal line in national affairs. During World War II, some of its officials worked as government advisers, but it wasn't till the Taft-Hartley act was passed in 1947 that the union took a major interest in politics again.

Annual financial reports required by T-H were no problem, because the union has been making a monthly financial report to all local lodges for years. It has also had a long-standing policy of two outside audits a year. And it has excluded Communists from membership since 1925, whereas T-H only excludes them from official positions.

However, after 1947, IAM set up the Machinists Non-Partisan Political League, aimed at Taft-Hartley and open to anybody. In 1948, it supported Truman and probably will support a Democrat again this year, though it had observers at the Republican convention last week.

## V. Modern Problems

For 60 years, the machinists' union was vulnerable to rival unions at one

# Tubing in the shapes you need to make your products light, strong

If your products can be redesigned to use tubing, there is a good chance you can make them more efficient at *less cost* with Armco Welded Steel Tubing.

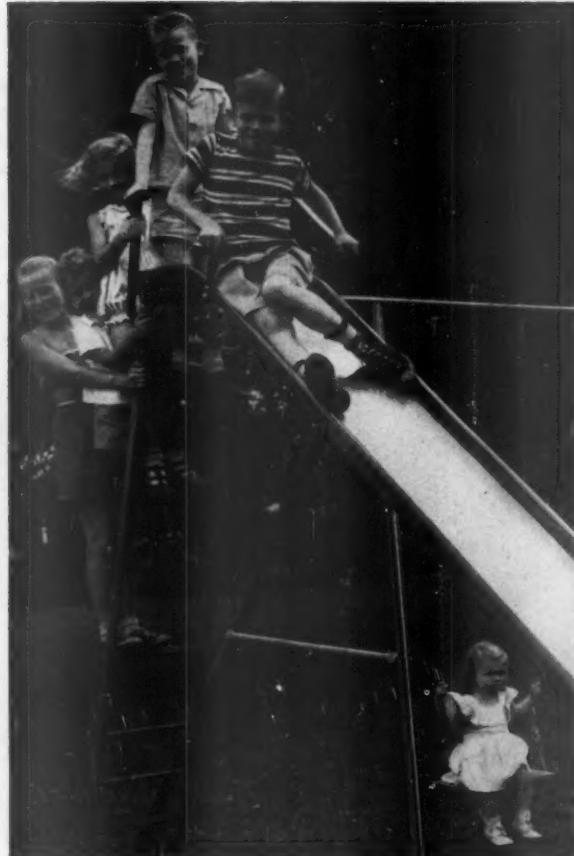
One reason is that you can get Armco Tubing *made to order* in almost any shape you require. By using special shapes, you may find it possible to cut fabricating costs. If you change to tubing from castings or other solid sections, it is almost certain to mean less weight, less bulk in your products.

Armco Steel Mechanical Tubing is pleasing to the eye, too . . . helps your engineers design products that are more salable.

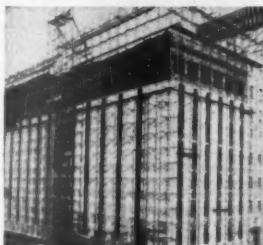
This steel tubing is supplied in sizes ranging from  $\frac{1}{4}$ " to 3" O.D. It is available now in hot-rolled or cold-rolled grades, or steels with special protective coatings. Ask your design engineers to write us for complete technical information.

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Armco Welded Steel Tubing stands up on the tough jobs. The resistance weld is actually stronger than the rest of the tube wall and just as ductile.





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Baths have changed—and so has soap. Today's soaps come from a specialized, competitive, billion-dollar industry—a big user of Hooker Caustic Soda. The soap industry is just one of many that call on Hooker for large tonnages of this versatile "workhorse" chemical.

### Maybe you have a job for Hooker Chemical BUILDING BLOCKS

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**Strong medicine** for houseflies and mosquitoes. Hooker "Mono" is used in making DDT bug-killers. That's not all. "Mono" goes into dyes, drugs, perfumes, paints. Like many Hooker "building blocks," it's a jack-of-all-trades chemical.

**MANUFACTURERS**—Hooker supplies 30 different industries with liquid chlorine, caustic soda, chlorinated compounds and intermediates. We specialize in chlorine chemistry. Perhaps we can show you how chlorine, or one of its many derivatives, can help you develop a better product or spark up production. Write for the "Story of Hooker Chemicals," which discusses this in more detail.



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**HOOKER**  
**CHEMICALS**

"... The union's entire legal staff . . . one lawyer . . ."

IAM PROFILE starts on p. 100

soft spot: Until recently, IAM officially excluded Negroes. This policy was based largely on the fact that the union had been formed in the South.

When, in 1948, the union finally got around to removing the archaic ban, it worked quietly, with a minimum of fanfare. Several thousand Negroes had already been admitted to the union by the time the rule was changed. And in the preceding years there had been practically no expressed anti-Negro sentiment. Since the change has been made official, the last vestiges of the early discrimination have disappeared. Negroes have been admitted freely, have been elected to local offices, and will be sent as delegates to this year's convention for the first time.

• **Government Relations**—One of IAM's outstanding accomplishments has been its system of dealing with government administrative agencies.

Shortly after the National Labor Relations Board was established, IAM trained a group of machinists in the workings of the Wagner Act and located them in cities where NLRB had regional offices.

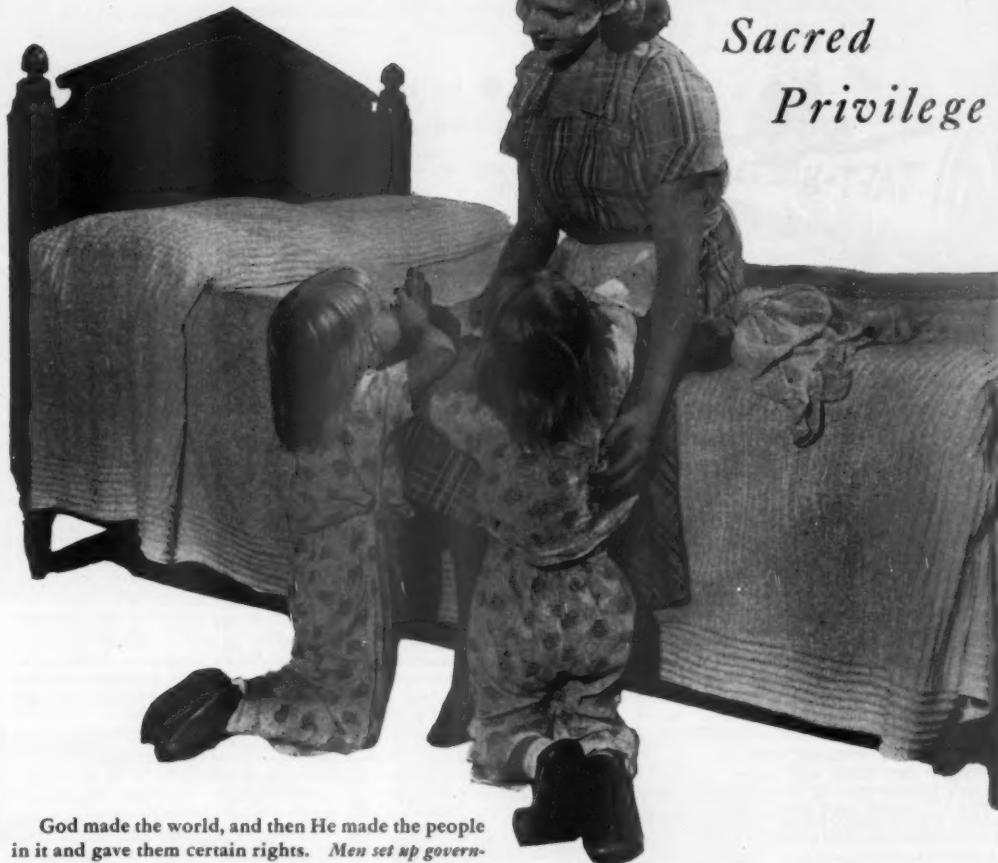
The union operates with the Wage Stabilization Board in the same way. Its regional men have been trained to handle union cases before the board's offices in terms of labor relations rather than law. IAM thinks it has done far better than it could have with a legal staff.

• **An Inside Job**—That attitude goes deeper than administrative litigation. Machinists are the core of the union, its power, and its tradition. The paid professionals who have been hired by the union to run its paper, its education department, and a few other operations are strictly outsiders. Executive council meetings are for machinists only, no technicians or professionals admitted. The international union's entire legal staff consists of one lawyer. Wherever it can, the union upgrades machinists instead of hiring outsiders.

• **Mechanized Office**—The union's headquarters is a neat, efficient operation, with machines doing such jobs as dues recording. In one room there's a shelf of books containing the names of every member the organization has ever had, and it is growing steadily.

Railroad employment has been gradually dropping off, and machine tool building suffers sharper ups and downs than any other industry. But the future of IAM is bright in aircraft, and the union has been moving into such new fields as electronics and radio production.

*Keep this  
Sacred  
Privilege*



God made the world, and then He made the people in it and gave them certain rights. Men set up governments to secure and keep the rights their Creator gave them.

In some countries, governments crush the right to worship God . . . lock religion out. When that's gone, the people cease to insist on their rights, or even to know they have those rights. That's what godless governments want.

When you think about it, the greatest liberty the U. S. A. gives us is the liberty to learn about God and worship according to the dictates of our hearts . . . and put Him before all else. We can lift our eyes or bow our heads privately or in public, and nobody is going to interfere. We can hear our children's

bedside prayers without fear that our kind of government is going to outlaw the God we have taught them about.

The only way to keep this sacred privilege is to keep out the forms of government which some men are trying to force upon us. It is our responsibility to protect our heritage of religious freedom.

"Every man, conducting himself as a good citizen and being accountable to God alone for his religious opinions, ought to be protected in worshipping the Deity according to the dictates of his own conscience." — George Washington.

***Norfolk and Western Railway***

PRECISION TRANSPORTATION

### "Hot Seat"



How labor papers see the GOP candidates' election problem.

## Ike Can Get a Share of the Labor Vote

Major labor leaders view the results of the Republican National Convention with distinctly mixed feelings.

In one sense they fervently wanted Robert A. Taft as the Republican candidate. They figured it would be easy to mobilize the labor vote and beat him. His nomination would also have meant that labor issues would be very large issues in the campaign.

On the other hand, while union chiefs did not seriously believe Taft could be elected President, they acknowledged that there was always a gambler's chance that he could make it. That possibility, they felt—with remarkable unanimity and fervor—would be a calamity.

• **A Bigger Job**—In another sense, then, they are happy about the victory of Dwight D. Eisenhower—even though it will make it much harder to deliver the labor vote to the Democrats. For Ike's popularity in America does not stop at the union hall. He is regarded with affection and respect among the rank-and-file of wage-earners, and the union leaders know it. Even in a militant, political-minded union like CIO's Auto Workers, thousands of its members served in the European theater of World War II and will vote for Ike despite UAW policy.

In trying to cut into the labor vote, Eisenhower got very little help from his party. In fact, one of the clearest inferences of the Republican convention is that the men who run it expect the party to win in November without help from the labor leaders, if not with

their active antagonism. Presumably, they decided that since they could not with logic, consistency, and self-respect go far enough to satisfy the labor leaders, they should not go any part of the way.

• **No Gesture**—Nowhere in the convention documents or in the speeches was there a gesture or overture to the union chiefs who, at least in their own belief, can influence a sizable number of their 15-million members.

The platform disregarded labor leaders' pleas on price and rent controls, health insurance, and other cherished planks. It reaffirmed the Taft-Hartley Act, with such amendments "as time and experience show to be desirable," which came as no surprise. This was consistent with the 1950 statement of Republican principles and objectives. The platform went even one step farther. It boasted of T-H as part of the party's "record of performance" in the 80th Congress. Plainly, the conviction has grown among GOP politicos that if the labor leaders still want to make Taft-Hartley an issue, their thrusts can be met with confidence.

The only signal in the party platform which Ike could use in making a pitch to labor is its approval of union shop agreements. To be sure, this is already written into Taft-Hartley, but spelling it out while the steel strike remains deadlocked over that very issue makes it a genuine pro-labor plank.

• **New Overtures?**—Will Eisenhower make more of a pitch for the union chiefs? The expert guessing is that he

● **Eisenhower must buck union propaganda against Taft-Hartley.** He is hampered by the fact that the GOP platform omits several planks that labor wanted.

● **He can expect a minimum of official organized labor support and a maximum of active antagonism.**

● **He will be opposed by the powerful labor-Fair Deal combine.**

● **Yet, if he strikes the right note on the issues that matter to organized labor. . .**

will, and that he can be effective once he has taken the trouble to inform himself on the issues that bother organized labor.

The correspondents who have observed him and know his managers do not believe he will be content to limit his labor leader support to William L. Hutcheson. General president of the AFL Carpenters, Hutcheson was an early caller on the general.

William McFetridge, president of the AFL Building Service Employees union, is also believed to be an Eisenhower admirer. But there the list of top-level labor routers seems to end.

• **Lewis, too?**—If the Eisenhower camp decides the list should be augmented, it is possible it could persuade that well-known Republican, John L. Lewis, to join up.

True, Lewis would have to climb over the Taft-Hartley plank, and rationalize a withdrawal of some unfriendly cracks about the general in the United Mine Workers Journal. But he may be able to take enough comfort from the elimination of Taft to find his way back to the Republican party. The Democrats' selection of a nominee may make it easier for him to decide.

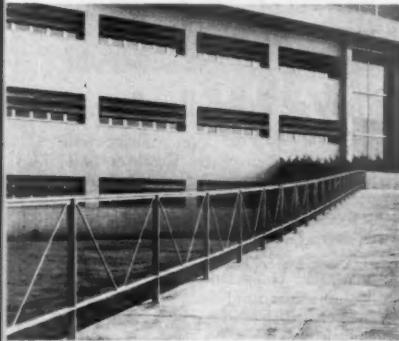
• **The Way Around**—The Republican labor plank makes it clear that the platform makers believe the party can reach the working man by going around his union leader. Take some of the Taft-Hartley "guarantees" cited:

• The right of the working man to "political activity of his own choice and freedom to contribute thereto."

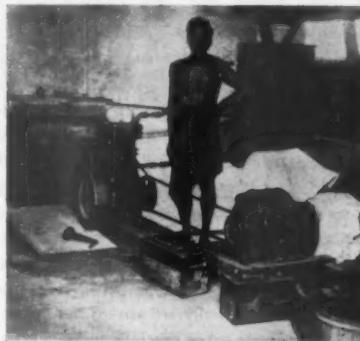
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**COLUMBIA COLOSSUS.** Here's the Grand Coulee Dam, one of man's most daring attempts to change the face of Nature. The tiny fan of pipes (12 feet in diameter) in the center of the picture is where water is pumped 280 feet out of the Columbia River to irrigate 1,029,000 acres of central Washington. The reservoir in the background is the Grand Coulee, the ice-age channel of the Columbia River. United States Steel supplied a great deal of the steel and cement used in constructing this breath-taking contribution to America's growth.



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**ABANDONED BY U. S. FORCES** in the Solomon Islands, this Witte diesel engine made by U.S. Steel lay forgotten in the jungle mud for five years before a missionary recently discovered it. He removed the accumulated mud, filled its tanks with fuel and water—and the engine started at the first try and has been running dependably ever since.



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**FACTS YOU SHOULD KNOW ABOUT STEEL**  
In 1951, United States Steel and approximately 80 other steel-producing companies in America poured 105,134,553 tons of steel ingots and castings... 17.3 million tons more than the annual average production of World War II. Total annual capacity is rising toward an expected 120 million tons sometime in 1953.



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When you specify Bendix-Westinghouse Air Brakes you can do so with the complete confidence that comes with making the best choice—and knowing it! Your judgment is backed by the fact that no other brake in the field has rolled up such an outstanding record of superiority over billions of miles traveled on all kinds of hauling jobs. And, as most practical trucking men will tell you, this remarkable record goes farther than better braking performance alone. The real pay-off comes in the **cost cutting economy**—economy that results from rugged, durable construction and a smooth, constant braking effort that multiplies the miles between service stops and **decreases maintenance costs on linings, drums, tires and chassis** while actually increasing their operating life! That's because these mighty brakes are built to the highest standards by the most experienced manufacturer in the business.

Take advantage of it—when you specify Air Brakes, specify the proven brakes—Bendix-Westinghouse, the world's most tried and trusted air brakes.



BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY  
ELYRIA, OHIO

while restricting the right of the man's union to so contribute.

• "The right to protection against unfair practices by either employer or union officials."

• "The right to a secret ballot in any election concerned with his (working man's) livelihood."

• **Record Speaks**—These are illustrations and extensions of a persistent belief that the working man is more conservative than his union leader, that he is often a captive of the union, and that, given a chance, he will repudiate his union leader. But the record of secret balloting on wartime strikes under the Smith-Connally Act, and in the employer's "last offer" and union-shop elections under Taft-Hartley, tends to support quite the opposite view. For this reason, Eisenhower, like Dewey and Willkie, will almost surely go beyond the platform in his appeal to labor.



## **They're Friendly, But . . .**

Looking to next week's Democratic convention, Sen. Estes Kefauver (left) put his coonskin cap on Joseph Beirne, president of CIO's telephone workers and a convention delegate. But rival Averell Harriman continued to pile up labor support, getting a cautious commitment that Harriman "meets our specifications as a candidate."

CIO, which claims 100 members are convention delegates, called a caucus this weekend to discuss presidential preferences. Favorites seemed to be Harriman, Gov. Adlai Stevenson, Kefauver, and Vice-President Alben Barkley.

Whatever position the CIO people may take now, it's a cinch that when President Truman announces his choice, it will be labor's choice, too.

AFL, which also claims a batch of delegates, traditionally takes no stand in advance of an actual nomination.

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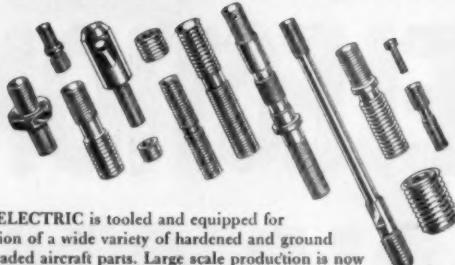
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OHIO ELECTRIC is tooled and equipped for production of a wide variety of hardened and ground roll-threaded aircraft parts. Large scale production is now under way; parts are being delivered to major manufacturers of jet engines and accessories. If you have a problem requiring experimental or quantity production of parts manufactured to "tenths," consult Ohio first.

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reference bulletin  
No. 308 —  
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## Collusion . . .

. . . charges in two Chicago cases may be beginning of crackdown on restrictive practices.

For years, there have been periodic, ineffective murmurs against collusive practices in the tightly unionized construction industry. Few contractors can survive without union labor. Often, say the charges, contractors must subscribe to employer association-union "standards"—including cost schedules—or do without the labor.

• **Crackdown**—This week, two Chicago contractor associations and two unions under federal grand jury indictments on antitrust-law charges.

The new action is similar to a precedent-setting case in Nevada last November (BW—Nov. 24'51, p32). In that case a union leader and two businessmen were sentenced to jail—first prison terms handed down in an antitrust case since 1936.

The new action, and an announcement that other Chicago cases are coming up, may presage a crackdown all along the line.

Chicago indictments name these defendants: in one case the Chicago Employing Lathers' Assn., Local 74 of the Lathers International Union (AFL), and two association members; in another, the Employing Plasterers' Assn., Local 5 of the Journeymen Plasterers' Society (AFL), and the union's president.

In both cases, defendants are charged with conspiring to restrict and monopolize installation of plastering and lathing materials in Chicago.

• **Restrictions**—Indictments are based on charges that unions and associations agreed, separately, to reduce the number of lathing and plastering contractors in the area—limiting those in business to contractors willing to use union labor and to adhere to certain "standards" set by associations.

Justice Dept. lawyers charged that the lathers' association, for instance, barred any contractor who hadn't held union membership for at least five years (a restrictive rule which would bar all but those related by blood or marriage to Local 74 members) or who had not otherwise got union clearance.

The lawyers seeking the indictment further charged that the lathers' association "encouraged" Local 74 to cooperate by money payments.

• **Result**—According to the grand jury indictment, the "conspiracy" reduced the number of contractors in the Chicago area from 95 to 36, and boosted construction costs.



## SILICONE PREVIEWS



Where  
**G-E SILICONES**  
**SOLVE**  
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Is *weight* a problem in the design of your product or equipment? Perhaps G-E silicones can solve it.

Electrical equipment insulated with General Electric silicone resins can be made much lighter. Examples? The weight of a transformer for aircraft use was reduced almost *two-thirds* when insulation made with G-E silicone resin was used. Redesigning a welder to take advantage of this insulation saved 25% of the copper formerly required!

### THE FOUR BASIC PROPERTIES OF G-E SILICONES



**G-E SILICONES FIT INTO YOUR FUTURE**

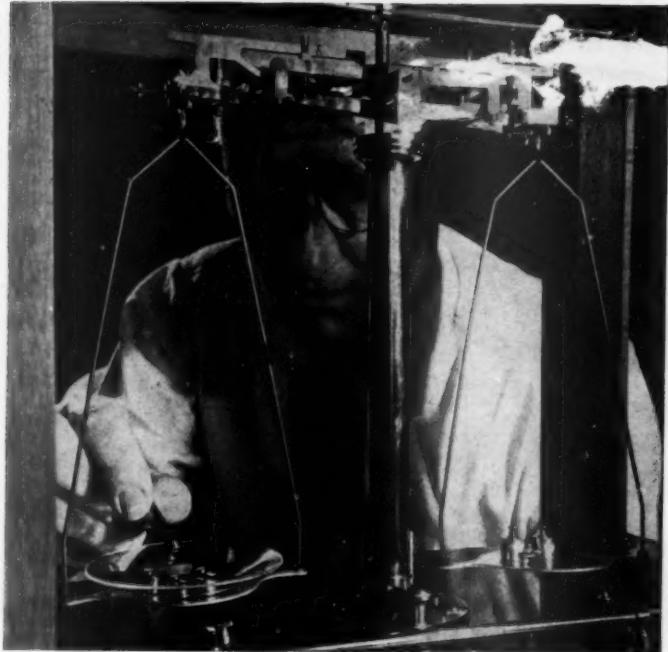
**GENERAL** **ELECTRIC**

Less bulky! And lighter, too. Electric cords insulated with G-E silicone rubber would have exceptional heat resistance, yet they would be much lighter and more attractive than conventional asbestos-cloth-insulated cords.



### GET NEW FACTS

Or maybe *your* problem involves heat or cold. G-E silicones (rubber, fluids, resins) resist heat up to 500 F., cold down to subarctic temperatures. Why not send for "The Silicone Story"—a free booklet which gives you *new facts* on other remarkable properties of G-E silicones? Just write to General Electric Company, Section 130-4A, Waterford, N. Y. (In Canada, Canadian General Electric Company, Ltd., Toronto.)



## How much grease will a bearing keep?

IT ALL DEPENDS upon the application, of course, but grease-retaining properties can be extremely important in the operation of ball bearings. Automobile clutch bearings, for example, must not throw grease: if they did, grease would get on the clutch, causing it to slip and chatter.

Federal technicians weigh the specified Federal Ball Bearing, run it under actual operating conditions, then re-weigh the bearing on a precision balance to determine the amount of grease lost. The difference in bearing weight before and after testing cannot exceed four grams!

Of course, this is only one of the many tests used to prove Federal Ball Bearings—and only one of the many reasons you can be sure of top-notch performance from every Federal Ball Bearing.

THE FEDERAL BEARINGS CO., INC., POUGHKEEPSIE, N. Y.



**Federal** BALL BEARINGS  
*One of America's Leading Ball Bearing Manufacturers*

## Wage Cuts . . .

. . . stir labor's demands for higher federal pay rates —to hold up hourly wages in soft industries.

Strong pressure is developing in labor for higher minimum-wage rates. The idea is not so much to raise pay—contract rates are already well above most legal minimums. The real point is to get a firm floor under wages.

• **A Reminder**—Labor would like to have legal minimums set at about present base rates for two reasons:

- It wants a ground level below which employers can't cut pay. The recent arbitration award which lowered Bates Mfg. Co. pay 7½¢-an-hour jolted the unions. It reminded them that the wage elevator runs two ways—up and down.

- It wants to bar nonunion employers from paring down wages and prices to cut into the business of union employers. Labor is particularly concerned about the movement of industry into the South, and about a growing trend toward subcontracting work. Usually, unions claim, both involve production at a lower wage cost, and both result in a loss of union jobs.

AFL and CIO, and their member unions, wanted the hourly minimum in the Fair Labor Standards Act raised this year from 75¢ to \$1.25. Congress didn't take up the proposal.

• **New Tactics**—With a change in the FLSA minimum barred until 1953 at the earliest, labor is shifting its tactics. What it can't get under the wage-hour act, it hopes to get through the Secretary of Labor under the Walsh-Healey Public Contract Act.

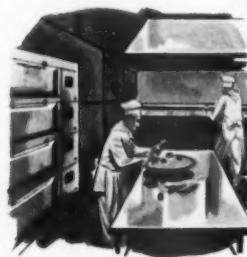
This act, passed in 1936—two years before the broader FLSA—permits the Secretary of Labor to set minimum wages, hours, and work conditions on government contracts for more than \$10,000. Through the years, this authority was used to lift minimums in many industries above those in FLSA.

Industry frequently complained that the Secretary's power was too broad and final, that it was "bureaucratic" and "self-expanding . . . far beyond the original intent of Congress." When Secretary Tobin sought earlier this year to extend his authority even further—over subcontractors handling orders from government contractors—industry kicked hard enough to get congressional action.

• **Stepped On**—In amending the Defense Production Act, Congress curbed the Secretary's Walsh-Healey authority. It set rules for preliminary hearings on proposed minimum wage designations



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CORROSION and HEAT-RESISTANT STEELS



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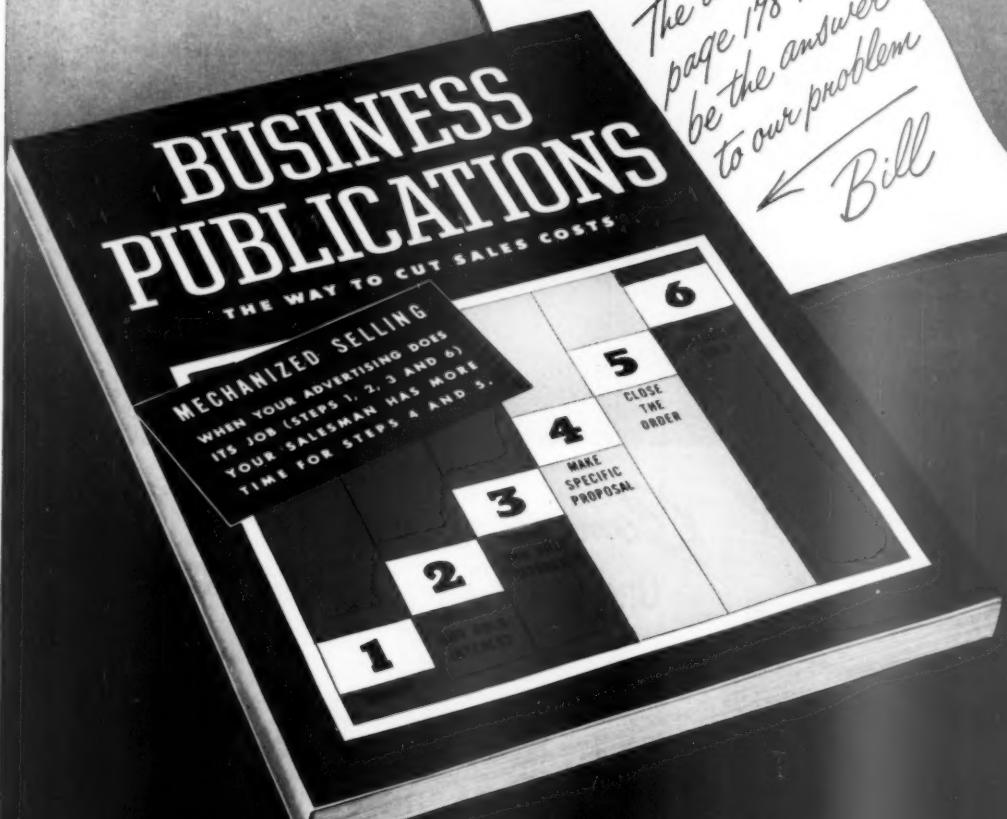
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**PIONEER in Specialloy Steels**  
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# Your Introduction to the



# Men Who Influence Sales

Salesmen are not clairvoyant. They can't always tell just when a prospect is in the market for equipment or services. Nor can they be in more than one place at a time.

Your advertising in Business Magazines is your introduction to, and continuous contact with, the men who influence sales. It's your assistant "salesman" . . . keeping your product story before thousands of prospects at the same time . . . at a cost which can be counted in pennies per call.

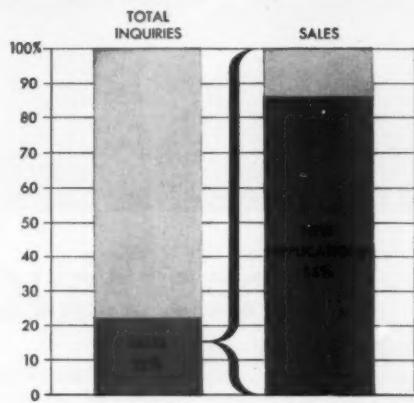
In other words, Business Paper Advertising is to selling what good machines are to production. It multiplies individual effort.

That's why we call it "Mechanized Selling." It applies the high speed, low, cost tool of advertising to the preliminary steps of ferreting out, contacting and conditioning prospects. Thus your salesmen can concentrate their skill on the important job of getting the order.

Ask your McGraw-Hill man for a copy of our 20-page booklet, "Mechanizing Your Sales with Business Paper Advertising." Also about our sound-slide film "Mechanized Selling . . . Blueprint for Profits" which is available for showing at sales meetings.

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A manufacturer developed a new product with wide potential in the entire electrical field. To save sales time he took space in five business publications and ran advertisements featuring case history and application data. Result: A steady increase in volume—22% of all inquiries converted to sales—85% of sales from advertising introduced new applications.



**McGRAW-HILL PUBLISHING COMPANY, INC.**



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HEADQUARTERS FOR BUSINESS INFORMATION





*Photograph by Vilis Alton*

# Times have changed

Rarely seen today except in museums and antique shops is the old-fashioned wooden Indian once used as a symbol by stores selling tobacco. Fast disappearing, too, are many of the old-fashioned methods that used to make the growing of tobacco a difficult and uncertain job.

For example, the tedious and back-breaking method of hand-weeding tobacco plant beds is rapidly being replaced by the Cyanamid method of weed control. AERO® Cyanamid, Granular destroys weed seeds before they have a chance to germinate. It also fertilizes the soil, thus producing stronger, healthier, disease-resistant plants, which are essential in growing our country's annual average crop of almost two billion pounds of tobacco. So effective is AERO Cyanamid that its use is spreading rapidly throughout the tobacco growing districts.

Here is another example of how Cyanamid chemistry is contributing to the efficiency and productivity of American agriculture and industry.



*AMERICAN Cyanamid COMPANY*

30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

and for the first time allowed court appeals on minimum-wage orders."

The amendment sidetracked the Secretary's—and labor's—hopes for extending Walsh-Healey controls over subcontractors. But it hasn't lessened labor's determination to try for higher minimum rates.

• **Textile Tests**—CIO's Textile Workers Union of America, still smarting under its 7½¢-an-hour pay cut at Bates (BW-Jun.21'52,p123), is well up front in the Walsh-Healey parade.

TWUA wants textile minimums boosted to "protect textile workers' wages against the sort of thing (wage cuts) we are suffering elsewhere."

• **Requests**—At recent hearings in Washington, the union asked that the minimum wage in woolen-worsted be raised from \$1.05 to \$1.26½. It also asked that numerous fringe benefits in TWUA contracts be made mandatory on government-contract work.

TWUA will also ask at a Washington hearing July 31 for an increase, from 75¢ to \$1, in the minimum for aviation-textile workers. In September, the union will ask for an increase in the cotton-rayon industry, from a present 87¢ to \$1.16½.

## LABOR BRIEFS

**Foremen** would regain legal status as employees, and bargaining rights, under a bill written by Sen. Blair Moody (D., Mich.). It will be a big point in his election campaign to woo support of the Foremen's Assn. of America—strong in Detroit auto plants.

• **Dame Rumor** helped the United Auto Workers (CIO) win bargaining rights at Hayes Aircraft in Birmingham, the International Assn. of Machinists (AFL) has told NLRB. IAM lost, wanted the vote set aside because Hayes didn't deny rumors that it could control IAM, and wanted it chosen. NLRB rejected the plea: IAM backers had circulated the rumor, hoping to get votes—but lost votes instead.

**Boycott** of the new WSB (BW-Jul.12 '52,p13) is getting serious labor consideration. As long as Congress retains veto power over board appointments, AFL and CIO may refuse to name representatives to the board.

**Goodyear** is chief target this year for CIO's United Rubber Workers. Since only a wage hike is involved, URW is pressing for a quick settlement. What it wants is a pattern others will follow. Meanwhile, URW is negotiating with Firestone and Goodrich on a long list of issues, and began pay talks with U. S. Rubber last week. → Page 126.



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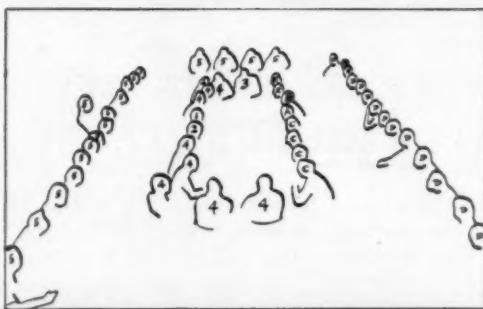
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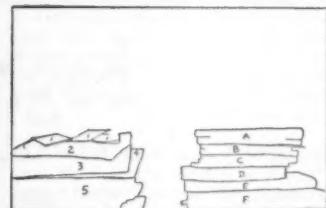


### Union Team

1. International President L. S. Buckmaster
2. International vice-president
3. Union economist
4. Presidents of nine branch locals
5. Officers and policy committee members of ten other locals

### Company Team

- A. Director of Industrial Relations E. M. Cushing
- B. Supervisor of labor relations
- C. Four home office and five division industrial relations staff members
- D. Management of 19 branch plants



**UNION** negotiators' documents include:  
 1. bargaining agreements, 2. wage data covering straight-time and average earnings, 3. arbitration decisions, 4. work standards records, 5. time study reports.

**COMPANY** ammunition: A. bargaining agreements, B. wage data, C. arbitration decisions, D. productivity studies, E. work stoppage records, F. earnings and profit reports of the company and competitors.

# Anatomy of Collective Bargaining



Disassemble a collective bargaining conference and you'll find it's made up of two unvarying components: men and documents. Here, to illustrate the common pattern, are the people and the papers at a contract-provided wage reopening session now in progress in New York City's Park Sheraton Hotel.

• **Differences Superficial**—This particular conference is a little larger, somewhat more important than most. It involves the multiplant operations of United States Rubber Co. and its CIO union—United Rubber Workers of America. At more routine negotiating meetings, the president of the international union wouldn't be on hand.

The personalities and titles of participants vary situation by situation, even session by session. But these are superficial differences, much less significant than the common elements.

• **In Common**—One of the outstanding characteristics of the collective bargaining conference is its internal balance. Largely for ritualistic reasons, company and union representatives are selected because their status parallels that of someone across the table: the union president, the director of labor relations; the local union official, the company branch manager; the union research man, the company economist.

And there is a remarkable similarity in the documents each side carries into the meeting. More and more, management and labor rely on common sources for their bargaining material: company financial statements; other contracts in the industry; government statistics on wages, profits, employment, living costs, productivity; economic forecasts.

• **Plenty of Room Left**—The comparability of men and materials involved has streamlined collective bargaining. It gives many negotiating sessions a focus and relevance that they didn't have in the past. There is less waste argument over facts.

Although it could never be proved objectively, labor and management agree that making collective bargaining more scientific has speeded up negotiating and encouraged agreement. But there always seems to be plenty left to fight about.



**"There's nuttin' to worry about, lady.**

**He only shakes when he sees Cyclone Fence!"**

• This burglar, like all would-be intruders, is afraid of Cyclone Fence and its grim barbed wire.

Day and night, Cyclone Chain Link Fence guards property, protecting it against the lawless. This rugged fence also gives plant management complete "entrance and exit control" over em-

ployees and visitors. Every Cyclone Fence is taut and trim—not only when first installed, but even after years of service.

If you're in the market for fence, or only thinking about it, you'll want our free book. It's a good reference to have on hand. Send the coupon for a copy.

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WAUKEGAN, ILLINOIS • SALES OFFICES COAST TO COAST • UNITED STATES STEEL EXPORT COMPANY, NEW YORK

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Our big, 32-page book is filled with photographs, drawings and graphic descriptions of 14 different styles of fence for industrial and residential protection. Fence specifications are set forth. Details of fence construction are given. Gates, window guards and other property safeguards are described. Whether you're interested in a few feet of fence or miles of it, you'll find this book worth your while. Send for your copy. It's free.

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Please mail me, without charge or obligation, a copy of "Your Fence."

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City..... Zone..... State.....

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Year in and year out  
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and casualty insurance and  
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**LONG LOADS**

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who operates a fleet of Gerlinger  
Model 4MH Carriers. The longer load  
lift capacity, plus the short turning  
maneuverability of a 110° wheel-  
base, make the 4MH Gerlinger out-  
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handling in restricted areas.  
Our new brochure describes  
the complete line of  
Gerlinger Carriers...  
Send for your copy today!

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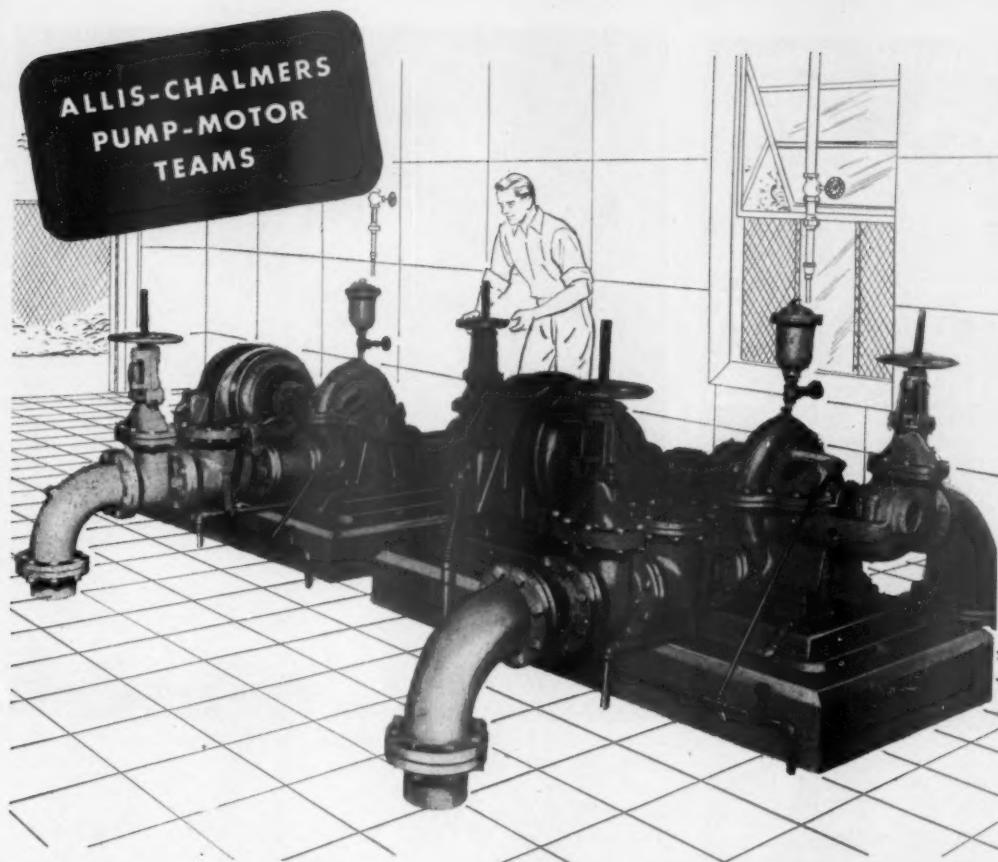
**Labor Quiz: Is this man . . .**



**. . . a union rabble-rouser?**



**. . . a demagogue? (Turn to page 130)**



## MORE WATER FOR JACKSONVILLE

**Thirty-four Allis-Chalmers Pumping Units Increase  
Water Supply of One of Florida's Fast-Growing Cities**

JACKSONVILLE, Florida's fast-growing industrial and transportation capital, is now completing a \$7,000,000 water expansion program.

The two Allis-Chalmers pump-motor teams shown above increase the city's water pumping capacity by over 2,500,000 gallons per day. Thirty-two other units, individually housed over artesian wells in

various parts of the city, are of sufficient capacity to handle foreseeable requirements for the next decade.

Thirty-three years ago, Jacksonville installed an Allis-Chalmers pumping unit, which is still in regular service. This performance record was a factor that again led to the selection of Allis-Chalmers equipment.

*Allis-Chalmers  
Makes Machinery to Help  
People Produce More—  
Have More—  
Enjoy More Leisure Time—  
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GENERAL MACHINERY DIVISION



MILWAUKEE, WIS.—PITTSBURGH, PA.—NORWOOD, OHIO—BOSTON, MASS.—TERRE HAUTE, IND.—MONTREAL, P. Q.—ST. THOMAS, ONT.

**SAVE 50% LABOR-TIME**  
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**ROURA** Self-Dumping **HOPPERS**  
—they pay for themselves



Only ROURA Has The Exclusive  
PATENTED Instant Release Handle



LOCKDOWN

Fitting any standard fork or platform lift truck, thousands of ROURA HOPPERS are in constant operation handling wet or dry, hot or cold, bulky materials. Simple to operate, only one man is required for distributing and unloading, quicker and easier.

The ROURA HOPPER dumps, rights and locks itself securely by a simple lift of the patented release handle. Sizes  $\frac{1}{2}$  to 2 cu. yds. ROURAS can also be designed for flat trucks and in other sizes to meet specifications can be equipped with special flanges to permit stacking for storage or future distribution. The ROURA will quickly pay for itself many times over.

Write today for detailed brochure.

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they use Aeroquip  
Hose Lines next?"

**Aeroquip**  
FLEXIBLE HOSE LINES  
DETACHABLE, REUSABLE FITTINGS  
SELF-SEALING COUPLINGS  
BREAKAWAY COUPLINGS • HYDRAULIC HOSES

AEROQUIP CORPORATION, JACKSON, MICH.



HE IS NEITHER nubile-rouser nor demagogue, but a Cuban radio actor (other pictures on page 128) whose job is . . .

## Reading While Cigarmakers Work

The cigarmaking trade has a halved place in the American labor movement. It produced Samuel Compers, the George Washington of American unionism, who organized his own trade and then went on to found and head the American Federation of Labor until his death in 1924.

Compers got his start as a labor leader in a singular way. He was a shop reader in a cigar factory. Cigarmaking is a trade that requires considerable manual skill but little mental concentration. So to occupy their minds, cigarmakers would hire one of their number to read to them while they worked. They would pay his wages themselves.

• **Bilingual**—Compers was picked by his shop for two reasons. First, he could read and speak both English and German, and 80 years ago most New York cigarmakers were German immigrants. Besides he had a good voice, which later was able to stir much larger audiences. Compers chose the subject matter himself, and much of it was from works on labor theory and socialism.

Today in almost any shop in the

U.S. where workers could listen to a reader, he would have to compete with Muzak—the piped music system—or a blaring radio. But it isn't impossible to imagine that the shop reader may be revived here, because it is an idea that fits into some modern thinking on personnel problems.

• **In Cuba**—While the reader has disappeared from the U.S., in Havana he is still practicing his art for cigarmakers. In the plant of H. Upmann Co., one of the biggest Cuban cigar factories, the reader probably draws a bigger paycheck than anybody in his audience; 500 workers chip in 20¢ a week each to meet his \$100 salary.

They get a slightly different kind of entertainment for their money than Compers gave his fellow workers. Instead of a socially conscious worker, the Upmann reader is an up-and-coming radio actor who reads them mystery yarns over a public address system supplied by the company. The management is happy with the set-up, because it cuts absenteeism. Nobody wants to miss the next thrilling adventure of Señor Sam Spade.

# 50 years ago this month, Willis H. Carrier founded the air conditioning industry

A printer in Brooklyn was having his troubles. Moisture content of the air was making his paper swell and shrink. But nobody could do anything about that . . . or could they?

Willis Carrier, then a young engineer with Buffalo Forge Company, thought he could. He designed a system that controlled the temperature and relative humidity in that print shop, winter and summer. This was the pioneer air conditioning installation.

Dr. Carrier and his associates formed the company which today leads the industry. And Carrier Corporation has virtually written the history of air conditioning. Carrier created the machines, opened the markets, blazed the trails.

That you are kept comfortable by air conditioning in bus, plane and train . . . restaurant, store and theater . . . office, factory and home . . . is due to the pioneering of this one company.

But Carrier has made even more important indirect contributions to your well-being. For air conditioning is also a production tool that is essential to the manufacture of synthetic fabrics, radar and electronic equipment, pharmaceuticals, precision aircraft parts, optical instruments, photographic film and scores of other products.

Air conditioning is an important part of your life today. But tomorrow it will be more important. For this industry of ours is very young. And its field of service is unlimited.

**Carrier**

AIR CONDITIONING • REFRIGERATION  
for 50 years—the people who know air conditioning best

# FINANCE

## MIDYEAR, 1952: 20 Representative Commercial Banks

	Deposits (in millions)	Approx. Ratio of Capital to Deposits		Ratio of Cash & Govts. to Deposits		Ratio of Loans to Deposits
	June 30, 1952	Dec. 31, 1951	June 30, 1952	Dec. 31, 1951	June 30, 1952	Dec. 31, 1951
Bank of America (S.F.) . . . . .	\$6,881	\$6,816	1-16	1-17	40.5	42.2
Bank of California (S.F.) . . . . .	375	379	1-14	1-15	60.5	60.7
California Bank (L.A.) . . . . .	527	507	1-20	1-20	70.4	71.0
Chase National (N.Y.) . . . . .	5,237	5,150	1-14	1-14	51.7	52.6
Cleveland Trust . . . . .	1,172	1,194	1-18	1-19	55.6	59.5
Commerce Trust (K.C.) . . . . .	423	466	1-16	1-18	61.7	59.7
Continental Ill. (Chi.) . . . . .	2,331	2,480	1-12	1-13	74.6	77.2
First Am. Nat'l (Nash.) . . . . .	182	196	1-15	1-16	57.7	63.8
First Nat'l, Akron . . . . .	153	169	1-19	1-21	64.1	65.7
First Nat'l, Baltimore . . . . .	264	285	1-14	1-15	69.7	74.7
First Nat'l, Chicago . . . . .	2,369	2,477	1-13	1-14	58.3	56.4
First Nat'l, St. Louis . . . . .	488	509	1-14	1-14	57.8	56.0
First Wisconsin (Milw.) . . . . .	587	602	1-17	1-18	79.2	77.4
Mfrs. & Traders (Buffalo) . . . . .	283	280	1-13	1-13	52.7	49.3
National Bk. of Detroit . . . . .	1,504	1,471	1-21	1-21	73.8	77.6
National City (N.Y.) . . . . .	5,542	5,443	1-15	1-15	55.7	56.0
Penn. Co. (Phila.) . . . . .	678	642	1-14	1-15	58.4	58.9
Philadelphia Nat'l . . . . .	812	813	1-12	1-12	60.0	60.5
Republic Nat'l, Dallas . . . . .	491	459	1-10	1-11	49.5	54.0
R. I. Hosp. Tr. (Prov.) . . . . .	232	257	1-12	1-14	64.7	62.3

## Bank Earnings Turn Upward in 1952

The banking business is gradually working out an adjustment to the post-war U.S. economy. And as it does, bank profits are picking up. This year, the banks—unlike most industries—hope to turn in a better earnings record than they did in 1951.

Now that the midyear balance sheets are coming in, you can see the trend by comparing June figures of some representative banks with their yearend 1951 statements (table).

To paint the picture with a broad brush:

- Banks continued gradually to strengthen their ratios of capital funds to deposits.

- At the same time, a 5% drop in business loans during the first half kept a good many banks from continuing to increase their ratios of loans to deposits.

- They did continue, however, to reduce their ratios of cash and governments to deposits. And they slightly increased their investments in other securities, notably tax-exempt municipals.

What lies behind these figures is the fact that most banks made more money during the first half of this year than they did in the same period of 1951.

- **FRB Move**—For their higher earnings, U.S. bankers had good reasons to

bless the Federal Reserve Board. For FRB's action in pulling the fixed pegs from under government bond prices, back in the spring of 1951, was a major reason for higher earnings. The peg-pulling started a trend to higher interest rates on all the money banks put to work, whether as loans, or as investments.

FRB wasn't particularly trying to boost bank earnings. It wanted to regain its traditional control of bank credit, which it had lost when it started supporting government securities at fixed prices. Partly because of its action, partly for other reasons, the fast post-Korea rise in bank loans to business was slowed down a lot during the rest of 1951. Volume of business loans has declined slightly during the first half of this year from the yearend peak—following the normal seasonal pattern.

- **Volume Up**—However, in spite of this decline, the volume of bank loans of all types averaged higher during the first six months of this year than the same period last year. Banks earned a higher rate of interest on these loans. For instance, it's estimated that New York banks are now averaging around 3.17% as compared with about 2.93% in 1951. That means the gross revenue of most banks increased faster during

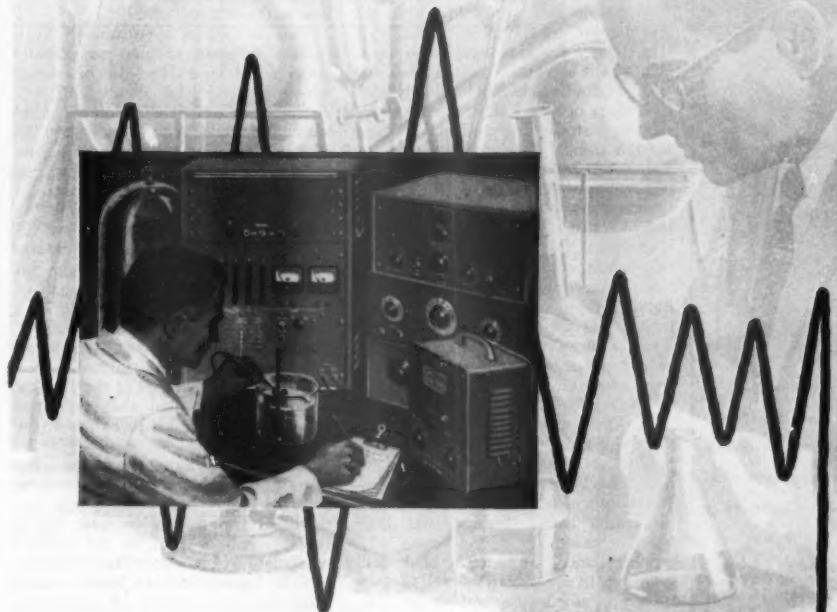
the first half of this year than costs and taxes. The result of this increase spells higher net profits, at a time when earnings of most industries are trending downwards.

Almost anyone who follows the bank picture at all closely would agree that most U.S. banks need those higher earnings badly. Bank capital earns a distinctly lower return than that capital which is invested in most blue-ribbon industrial companies. That is the reason why most bank stocks sell at hefty discounts to book value.

- **Scant Appeal**—The relative unattractiveness of bank stocks has created some big problems for U.S. banking. It has been a major factor behind the series of postwar "cash mergers" which have taken quite a few banks out of the picture, particularly in New York City, and tended to concentrate the banking business in fewer hands. Whenever stockholders of a bank see a chance to get book value in cash for stock they have purchased below present book value, there is a temptation to scuttle their bank.

Also, the fact that most bank stocks sell at a discount from book value has made the raising of new capital very difficult for banks that have no intention of going out of business. Yet there

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is great need for new capital in the banking business, because:

- The long-term trend is for deposits to increase.
- Bank supervisors are pressing banks to raise more capital funds, in order to strengthen capital-deposit ratios. They want a bigger cushion for the depositors' money against bad loans or investments.

A good many banks have gone out and raised new equity money by selling common stock. Of course, new stock usually has to be sold a little below present market value. When this selling price has also been below book value—as it so often is—it has had the effect of diluting the book value behind each share of stock. This doesn't make existing stockholders happy, even though usually they get first crack at the new shares.

• **Earnings**—Those banks which have preferred not to sell more stock have had to get their new capital entirely out of earnings. Of course even those banks which have sold stock have had to rely heavily on retained earnings to help build up capital funds. This means that most banks pay conservative dividends. That in turn tends to put a ceiling on market prices of existing stock. And so the vicious circle continues.

The only way out is to increase earnings. That's what bankers find so cheering about the first-half 1952 showing.

However, earnings could slope off again if: (1) either loan volume or interest rates decline, and (2) if salaries and other costs increase faster than gross revenue.

The chances are that the banks will continue to do at least as well as they are doing now for the rest of this year, anyway. Many banking observers believe that business loans will rise slowly during the second half to a new high. Some banks will have to pay excess profits tax this year, but not many. A recently published FRB survey estimates that all member banks paid only \$20-million in EPT last year.

• **Breakdown**—Most banks don't publish midyear income statements. So estimates of bank earnings are based in most cases on increases in capital funds since the 1951 year-end balance sheet, allowing for dividends paid out. This means that for most banks you can't give exact figures on where the increase in net earnings came from.

But the few earnings statements which have been published do show the trend. Take New York Trust Co. It boosted its gross revenue on loans about 25%, from \$4-million to \$5-million. Revenue from investments declined slightly. Increase in total operating revenue was about \$973,000.

How much of this was New York Trust able to bring down to net? Its salaries increased \$165,000, its reserve

for taxes by \$626,000 (about 35%). Net operating earnings rose from \$2,417,000 to \$2,566,000, an increase of about 6%. (Net operating earnings do not include profits and losses from sales of securities.)

Not every bank fared that well. National City Bank of Cleveland, for instance, had a handsome gain in revenues. It increased half-year gross revenue from about \$5.3-million in 1951 to about \$6.9-million in 1952. (Loans brought in \$4-million against \$2.9-million in the first half of 1951.)

This increase of approximately \$1.6-million in gross revenue was rapidly pared down by a 21% rise in salaries which increased by about \$307,000, an increase in federal income tax reserve from \$863,000 a year ago to \$1.8-million, and increases in other operating expenses. After all this, National City of Cleveland managed to inch up its net operating earnings by about \$18,000, or 1.2%.

• **Four Fell Off**—Naturally, there are individual banks which had lower net operating earnings for the first half of this year than in the comparable 1951 period. For instance, four out of 17 leading New York City banks did worse this year than last. By contrast, a year ago balance sheets of six of the 17 New York banks indicated that they had done worse in the first half than in the same 1950 period.

Although higher gross revenue has come from bank loans, and loans have averaged higher lately than a year ago, there was no over-all increase during the first half of 1952 in the loan-deposit ratios of banks. (That's the way analysts figure whether a bank is acting primarily as a lender of money—its traditional role—or primarily holding government bonds and cash.)

During World War II, banks had fewer opportunities to loan money, and at the same time were called on to invest heavily in government securities. At the end of the war, they were left with very low loan-deposit ratios, and very high ratios of so-called "riskless assets" (cash and governments) to deposits. Since then, they have gradually been increasing loan ratios and lowering "riskless assets" ratios.

However, during the first half of this year, business loans fell off about 5%. This naturally stopped the increase in loan ratios. In the absence of any substantial U. S. Treasury borrowing from the banks, there was some increase in holdings of other securities, particularly tax-exempt municipals.

The midyear balance sheets don't show the effect of the new \$4-billion issue of six-year 2½ Treasury bonds (BW-Jun.21'52,p146), which was dated July 1. A sizable part of this issue is expected to wind up in bank portfolios.

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This small hunk of hypothetical arithmetic is just to remind you of two things:

First, every building has more doors than sometimes even the owner realizes.

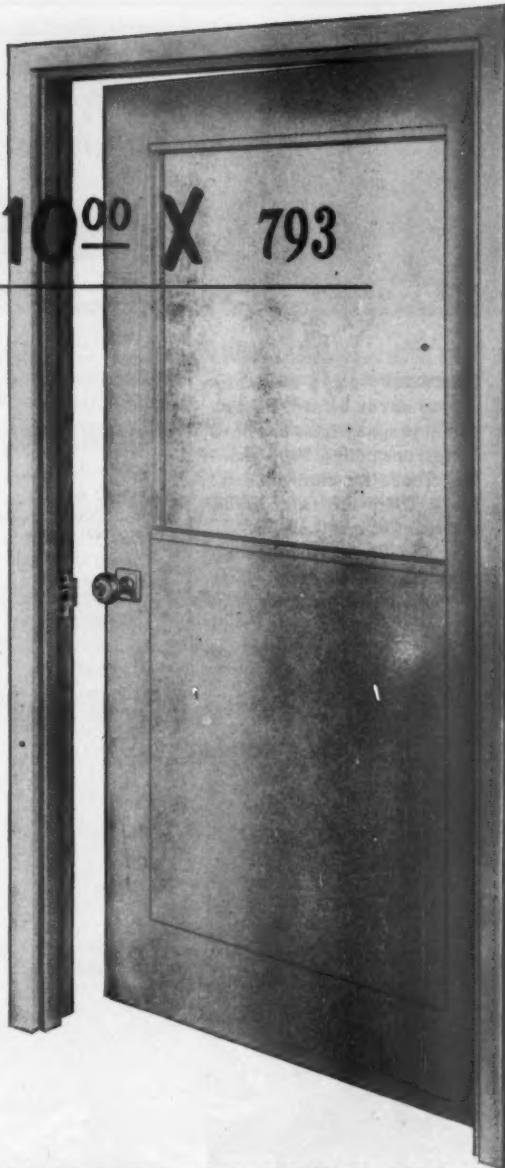
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## A Look at the Proposed

### OPERATIONS

#### The Record Alone...

Fiscal Years	Sales		Net Earnings	
	E. R. Squibb	Mathieson Chem.	E. R. Squibb	Mathieson Chem.
1939	\$19,749	\$10,967	\$2,061	\$1,096
1945	53,553	19,590	2,513	1,149
1946	59,835	20,524	5,151	2,033
1947	68,219	24,630	5,525	2,931
1948	73,452	31,935	3,692	4,823
1949	82,220	54,073	6,884	6,991
1950	87,535	75,776	8,058	8,994
1951	100,061	91,234	9,705	9,653

### FINANCES

Latest Statement	E. R. Squibb	Mathieson Chem.
Current Assets	\$69,326	\$44,284
Plant (Net)	28,569	87,624
Total Net Assets	108,811	142,178
Current Liabilities	24,380	14,145
Long Term Debt	*2,313	41,000
Capital Stock	23,868	33,714
Surplus	54,779	50,981
Working Capital	44,946	30,138
Net Worth	78,647	84,695

NB All figures given are in thousands of dollars. \*Biggest "wor year" of both companies. \*\*Does not include \$10-million of notes sold by Squibb since statement date in question.

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## New Consolidation in

Mathieson Chemical Corp.—in recent years the fastest growing unit in the chemical trade—served notice last week that it was going right on expanding. It announced plans for absorbing E. R. Squibb & Son, one of the top companies making antibiotics, vitamins, pharmaceuticals, and toilet goods.

The proposed merger would add over \$100-million to Mathieson's net assets, pushing them past the quarter-billion mark (table). It was announced jointly by Thomas S. Nichols, chairman-president of Mathieson, and by Squibb's chairman Carlton H. Palmer and President Lowell P. Weicker. Stockholders of both companies will soon be asked to approve the deal, which is based on a stock exchange—five shares of Squibb common for three of Mathieson.

• **Expansion Campaign**—The deal marks one more step in the aggressive expansion campaign that Nichols has been pressing ever since he took over direction of Mathieson in 1948. In his short reign, Nichols has quadrupled Mathieson's assets by judicious purchases of well-established companies. What's more important, he has brought a widely-diversified line of industrial and agricultural chemicals to a manu-

facturer once primarily confined to alkalis.

In 1949, Mathieson moved into the fertilizer field, absorbing two leading companies. Since then, two smaller units have been acquired. As a result, Mathieson is now an important factor in the fertilizer business.

Last fall the company invaded the organic chemicals, buying the Mathieson Hydrocarbon Chemical Corp. via a stock exchange.

Picking up the 96-year-old Squibb business will move Mathieson into both the ethical and the proprietary drug fields, as well as into cosmetics.

• **Doubts**—It's possible that the deal will prove as successful as Mathieson's earlier expansions. But you can find people in the Street who doubt. The skeptics base their thinking on the fact that Mathieson will have to hand the Squibb stockholders close to 2.2-million shares of common stock. That represents around \$103.4-million at the present market value of \$45 a share.

That price looks like a fair enough price-earnings ratio if you match it with Squibb earnings for 1951 (10.6 times) or 1950 (12.8 times). There's a catch, though. In both those years, Squibb

## Merger:

### ...and Together

#### Squibb & Mathieson

Sales	Earnings
\$30,716	\$3,157
73,143	3,662
80,359	7,184
92,849	8,456
105,387	8,515
136,293	13,875
163,311	17,052
191,295	19,358

#### Squibb & Mathieson

\$113,610
116,193
250,989
38,525
*43,313
57,582
105,760
75,084
163,342

## Chemicals

earnings broke records. If you make the comparison with other postwar years, the price Mathieson is willing to pay looks a lot higher. Thus it's over 15 times the Squibb net in 1949; and 21.5 times greater than average annual earnings in 1946-1948.

On top of that, Wall Streeters figure that Squibb's earnings for the 1952 fiscal year ended June 30 fell far short of 1950 and 1951. The belief is that 1952 was closer to the 1949 level. Some Streeters are ready to bet that it will be a long time before Squibb can match 1950 and 1951. They base their figuring on the fact that Squibb's expansion of its antibiotic facilities has coincided with:

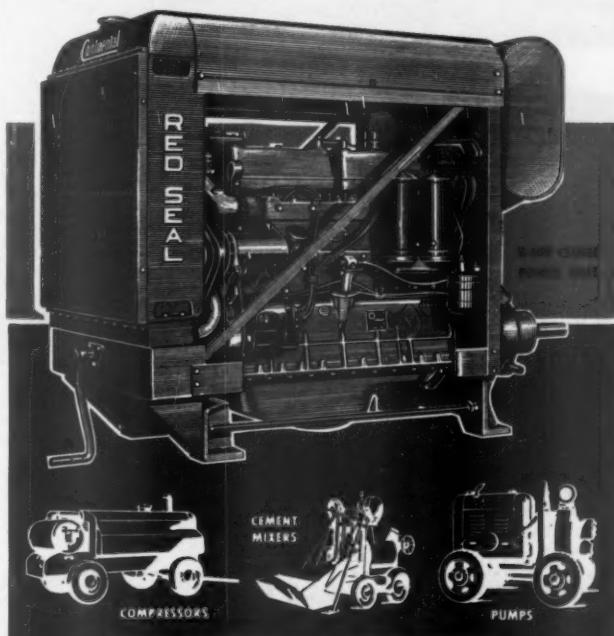
- A tremendous industry-wide expansion in penicillin, which is one of Squibb's important new products.
- A shrinking of the export market which has been a profitable field for the company.
- Increasing competition from specialty antibiotics like aureomycin and terramycin.

The combination of these factors has been forcing price cuts in antibiotics generally, thus cutting profit margins. The effects haven't been negligible for

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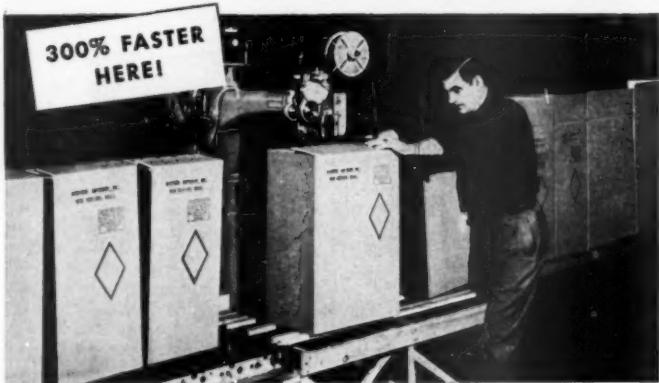
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Squibb. Its full report for fiscal 1952 isn't available yet, but second-quarter profits ran 34% below the figures 12 months earlier. For the third quarter, a 28% drop was reported.

As for Mathieson, its operations so far this year have been more profitable than those of the chemical industry generally. For the first six months of 1952, profits virtually equalled the first half of 1951.

However, during this period Mathieson has sold 180,000 shares of \$4.25 preferred stock. To pay for new properties, 480,000 more shares of common have been issued. That means that earnings available for the junior equity were only \$1.63 a share for the first half of 1952. The year before the figure was \$2.06.

If the projected Squibb deal goes through, Mathieson says it will operate Squibb as a separate division, retaining both its name and its policies. But the two major Squibb executives, Palmer and Weicker, will no longer play prominent parts in the firm's operations. Palmer will become a director of Mathieson, but will act merely in an advisory capacity. Weicker is also expected to become a director, with no managerial duties.

Wall Street doesn't expect the stockholders to balk when the deal is put up to them. Palmer is understood to control personally almost 30% of Squibb common, and the Weicker family has another substantial block. On the Mathieson side, Nichols and his directors are believed to be able to influence enough holders of common to insure an O. K. for the deal as now outlined.

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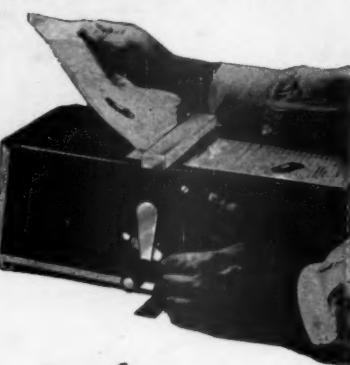
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## FINANCE BRIEFS

**Biggest utility issue:** Stockholders of Pacific Gas & Electric took up about 98% of a \$68-million offering of new common, biggest ever made by any U.S. utility operating company. It's estimated that stockholders subscription rights to 25% of these were bought by underwriters and resold. The 2% not subscribed for was sold privately by underwriters.

**New electric utility financing:** for the first half totaled \$1,135-million, according to the Edison Electric Institute. That's far and away the biggest for any such period.

**Sales of new life insurance:** apparently made a new record during first half of 1952, according to the Institute of Life Insurance. It reports that \$14.7-billion was sold. Total in force is now \$265-billion, up about 75% since the end of World War II.

**Continued slump at the box office:** (BW-Jun.7'52, p.126) forces movie producers to cut costs. Loew's, Inc., which recently cut its dividend, has finally reduced salaries of executives getting more than \$1,000 per week by 25% to 50%.

**Invasion of Toronto:** A recent purchase of seats on Toronto's Stock Exchange by a U.S. firm pushed the price from \$75,000 to \$90,000 since the last sale early this month. (Last selling price of a New York Stock Exchange seat: \$43,000.) Toronto brokers are getting worried about American domination. But they needn't; only five of 106 active seats are held by U.S. houses.

**June sales of new municipal bonds:** hit a postwar high, according to the Daily Bond Buyer. Due to the sale of \$326-million Ohio Turnpike bonds, the total was \$624-million. For the first half-year, the total topped \$2.5-billion.

**Postponed:** Atlantic Refining Co. has decided to postpone sale of 1-million common shares. It may decide to borrow part of the money instead.

**Vertical merger:** U. S. Pipe & Foundry Co., Burlington, N. J., plans to make Sloss-Sheffield Steel & Iron Co., Birmingham, of which it already owns 55% of stock, part of its own operation.

**Salt Lake Pipe Line Co.:** subsidiary of Standard Oil of California, has arranged to borrow \$7-million from a group of pension funds at 3 1/4%. The deal was handled through Bankers Trust Co., New York.

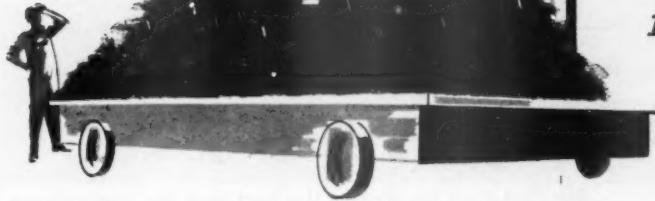
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There is no substitute for specialized experience. The strip steel products we produce are made on equipment designed to meet the quality standards associated with cold rolled strip steel—no substitute product produced by converting cold rolled sheet coils into strip widths can equal C&P's standards for close gauge tolerances and superior finishes. Where our competitors are strip sizes slit from sheet coils, we can point to our record without qualification. Just the ticket you would campaign for when less down time, longer die life, and more finished parts per ton is your desire. We believe we will merit your continuing support when you are called upon to ballot for better cold rolled strip steel products.

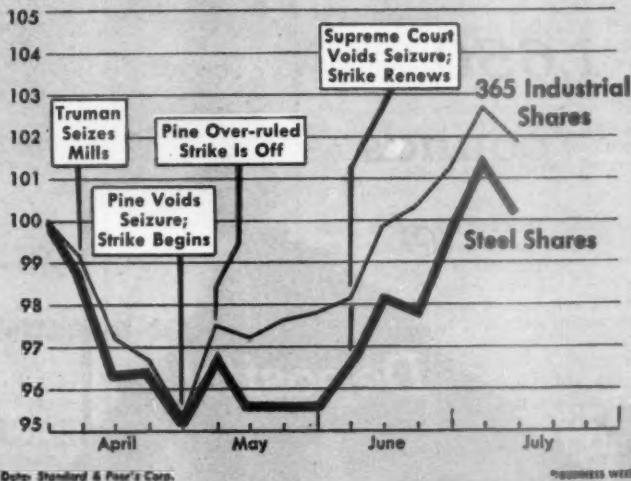


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# THE MARKETS

## Weekly Stock Price Indexes (1st week in April = 100)



## Prices Ignore Steel Strike

But that may be due to the fact that the low-volume market is made up largely of professionals. And breakdown of indexes reveals many weak spots.

That time-honored Wall Street adage, "Never sell on strike news," has come through its latest test with flying colors—so far, anyhow. The question is whether the market itself recognizes the serious effect a long steel strike might have on U.S. business.

The chart above—based on Standard & Poor's indexes—shows that steel stocks, though they faltered for a time, are now at about the same level as when the strike began to look certain back in April. The all-industrial index is even higher than it was then.

It would seem from this that the investors and traders have evidently not been worrying very much about what's going to happen to the profits of steel companies, and to corporate profits in general.

- **Superficial**—But that's only on the surface. Since April, volume of trading hasn't been very far above a million shares, most days. That means there has been very little public participation in the market. Most of the buying has come from professional traders and from investment trusts.

Lately, the professionals have begun to feel that the strike will have to be settled soon, and that there might be more widespread buying interest in the steel group as soon as the news of a settlement is out. That's why more and more traders have started to pick up some of the steel shares, in hopes of a quick speculative profit when the strike is finally settled.

It's now a little over six weeks since the Supreme Court ruled that President Truman's seizure of the steel industry was illegal—when the strike began in earnest. Practically all of the march of the S & P weekly industrial index to new highs has been made since then, in spite of the fact that the strike has slowly but surely begun to paralyze more sections of U.S. manufacturing.

- **Trust Buying**—Some Wall Streeters think that this move of the industrial index has been overstressed. They say it's mainly due to investment trust and pension fund buying of bellwether stocks, the kind that naturally form a part of any index. They point out this



## TOUGH NYLON SEWS UP A SHOE PROBLEM

The manufacturer of these children's shoes had a serious return problem. His retailers were sending back several dozen pairs every month because the shoes were coming apart at the seams after as little as 6 to 8 weeks' wear. The manufacturer switched to thread of Du Pont nylon fibers. Since then, not one pair of shoes has been returned because of thread failure.

Nylon's combination of strength and elasticity is what makes shoes stitched with nylon thread stand up so much better to the scuffing a child gives them. Nylon resists deterioration from mildew, fungus, body acids and moisture that weaken ordinary thread. Nylon doesn't act as a wick either, bringing moisture from wet pavements and puddles into the shoe.

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is finer, though stronger, than ordinary thread, it doesn't need as big a hole—the leather is practically at its original strength at the stitches. Nylon thread buries itself in the leather better than ordinary thread—is less exposed to wear. It keeps seams tighter, yet still permits the shoe to flex comfortably when worn.

Nylon is now being used in a wide variety of products—industrial filters, fishing nets, rope, and many others.

Perhaps nylon's performance in shoe thread will suggest a way you might use this versatile Du Pont fiber to solve your sewing problem, make a new product . . . or improve an old one.

**NEW BOOKLET:** "Nylon Textile Fibers in Industry" contains 23 case histories, shows you how businessmen are using nylon in industry today. Write for your copy. Tell us your fabric or fiber problems. Address Textile Fibers Department, Room 2498B-7, E. I. du Pont de Nemours & Co. (Inc.), Wilmington, Delaware.



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doesn't mean there has been an over-all push-through of stocks.

If you doubt this, look at the detailed breakdown of S & P's indexes for the different stock groups (below). Though it shows the industrial index 5.4% above the 1929 high, the composite index for all stocks is still nearly 21% below its 1929 high-water-mark. The rail and utility indexes are far, far beneath their 1929 highs.

Break up the industrial stocks into individual groups and the disparity is still more obvious out of the 45 groups, 27 are still below their 1929 highs.

Several of these are 60% or more below their 1929 high marks.

• **Inventory Shaved**—Of course, the steel strike has had one good effect. It has done a great deal to reduce top-heavy inventories of durable consumer goods.

But don't let the market indexes fool you. The strike has hurt. This six-week shutdown has cost the steel companies a lot of profits. It's very much of a question how much of these losses can be made up in the months ahead. Higher prices probably won't fully compensate for the new wage bill.

## Bull Markets: 1952 vs. '29, '37, '46

Standard & Poor's Weekly Indexes (1935-39=100)

Stock Groups	1929	1937	1946	Recent	1929	1937	1946
	High	High	High	Level	1929	1937	1946
Composite Index	340.9	139.8	188.6	190.8	-90.8%	+86.8%	+100.8%
Industrial Index	197.7	140.7	163.2	208.1	+5.3	+47.9	+37.8
Railroad Index	460.2	371.1	168.8	174.6	-62.1	+1.9	+8.8
Utility Index	386.0	136.0	132.3	116.6	-69.8	-14.8	-11.9
Agricultural machinery	194.1	177.1	160.5	167.0	-14.0	-5.7	+4.0
Aircraft manufacturing	385.4	140.7	183.1	125.7	-67.4	-10.7	-31.3
Air transport	332.1	165.9	624.3	327.2	-1.5	+93.0	+47.6
Automobiles	210.6	155.9	160.0	220.3	+4.6	+41.3	+32.7
Auto parts, accessories	247.4	151.0	170.2	157.1	-36.5	+4.0	-7.7
Bituminous coal	361.1	131.1	248.1	473.1	+31.0	+260.9	+90.7
Building materials	209.2	146.5	161.8	170.1	-18.7	+16.1	+5.1
Capital goods stocks	215.3	153.7	147.0	190.9	-11.3	+24.2	+29.9
Carpets, rugs	352.9	200.7	306.6	123.9	-64.9	-38.3	-59.6
Chemicals	158.4	130.5	151.8	247.5	+56.3	+89.7	+63.0
Confectionery	105.8	107.1	130.5	125.0	+18.1	+16.7	-4.2
Consumers goods stocks	201.1	131.2	175.8	172.6	-14.2	+31.6	-1.8
Copper	244.7	188.7	147.1	179.8	-26.5	-4.7	+22.2
Department stores	342.3	160.9	145.8	269.9	-21.2	+67.7	-21.9
Distillers	186.7	139.0	633.8	403.4	+116.1	+190.2	-36.4
Electrical equipment	239.6	158.0	133.3	157.7	-34.2	-0.2	+18.3
Fertilizers	347.0	168.3	305.4	455.9	+31.4	+170.9	+49.3
Finance companies	97.8	139.8	113.1	149.9	+53.3	+7.2	+32.5
Se, 10c, \$1 chains	205.4	143.2	156.9	126.3	-38.5	-11.8	-19.5
Food companies	254.3	124.6	163.0	147.3	-42.1	+18.2	-9.6
Food chains	413.1	120.0	248.6	252.5	-39.9	+110.4	+1.6
Glass containers	63.0	151.0	162.9	126.7	+101.1	-16.1	-22.2
Gold mining (U. S.)	121.3	106.8	58.2	58.2	-52.0	-45.5	-
High-grade commons	121.4	135.5	154.3	125.1	+27.1	+13.9	-
Lead, zinc	164.1	170.2	139.7	125.1	-23.8	-26.5	-10.5
Leather	310.3	187.0	221.9	166.7	-46.3	-10.9	-24.9
Low-price commons	333.5	200.6	315.7	192.9	-42.2	-3.8	-38.9
Machinery	150.0	160.0	154.6	169.6	+13.1	+6.0	+9.7
Mail order, general chains	272.7	144.2	241.1	243.6	-10.7	+68.9	+1.0
Metal containers	138.1	127.7	94.0	105.3	-23.8	-17.5	+12.0
Metal fabricating	504.5	196.7	178.2	153.8	-69.5	-21.8	-13.7
Mining, smelting	161.4	159.0	113.0	137.1	-15.1	-13.8	+21.3
Motion pictures	773.5	170.5	350.3	135.1	-82.5	-20.8	-61.4
Office, business equipment	297.0	141.1	165.1	239.7	-19.3	+69.9	+45.2
Oil—Crude producers	159.3	170.8	211.7	795.0	+399.1	+365.5	+275.5
Oil—Integrated	215.5	142.5	155.9	314.0	+45.7	+120.4	+101.4
Paper	274.3	237.4	328.6	562.3	+105.0	+130.9	+71.1
Printing, publishing	621.9	168.4	285.5	112.6	-81.9	-33.1	-60.6
Rail equipment	290.9	176.3	153.5	103.6	-64.4	-41.2	-32.5
Rayon	320.5	159.6	376.4	524.0	+63.5	+228.3	+39.2
Shipbuilding	130.4	132.1	244.7	244.9	+87.8	+85.4	+0.1
Shipping	448.6	176.9	459.7	597.7	+33.2	+237.9	+30.0
Shoes	176.0	117.7	144.7	116.7	-33.7	-0.8	-19.4
Soft drinks	44.5	150.1	188.4	102.8	+131.0	+31.5	-45.4
Steel	316.4	184.6	159.5	198.6	-37.2	+7.6	+24.5
Sugar	165.7	144.0	151.3	113.2	-31.7	-21.4	-25.2
Textile weavers	162.7	158.3	285.1	292.5	+79.8	+74.8	+2.6
Tires, rubber goods	353.9	191.4	307.4	463.1	+30.9	+142.0	+50.7
Tobacco	119.4	119.5	105.1	74.9	-37.3	-37.3	-28.7



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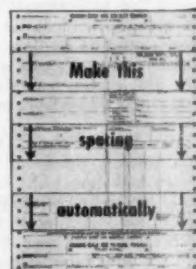
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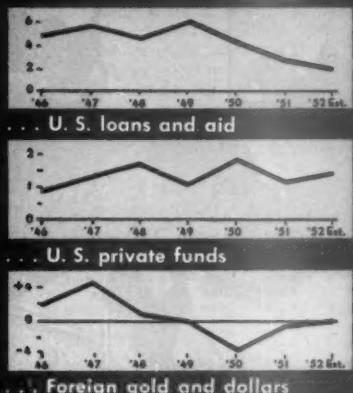
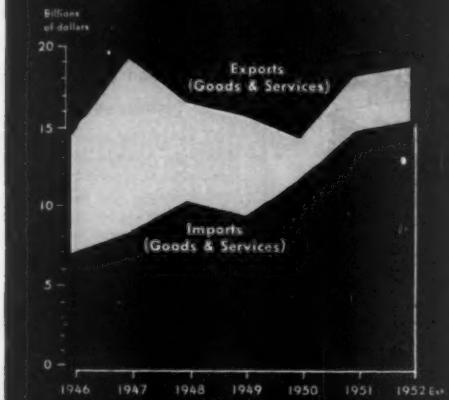


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# BUSINESS ABROAD

## Postwar U.S. Export Surplus is offset by...



Data: Dept. of Commerce

## Exports Soar—Can World Pay?

**U.S. exporters will at least match last year's business—but Europe's dollar problem still plagues the West.**

Last weekend, when most Americans were talking about Eisenhower's Chicago victory, Washington produced two news items that no foreign trader could afford to miss:

• The Commerce Dept. announced that U.S. exports in May (the latest month recorded) hit an all-time high of almost \$1.5-billion. Even after deducting \$217-million of military shipments, May exports were running at an annual rate of \$15-billion, or well above 1951.

• President Truman ordered the Public Advisory Board for Mutual Security to look into U.S. foreign trade policies, especially the recent moves in Congress for higher protection against imports.

Add the May export figures to those for the first four months of the year and you get a good idea of how strong the foreign demand is for U.S. goods. Commercial exports for the five-month period ran at an annual rate of \$14.9-billion, whereas the total for 1951 was \$13.7-billion.

• **Early Fears**—A few months ago, many U.S. exporters feared that business this year might not be as good as

last. They were alarmed by new import curbs abroad, especially in the sterling area and Brazil. Now it's obvious that, over-all, these fears were exaggerated.

• **Dollar Gap**—The trade figures for January through May contain more than this good news. They show that the dollar gap is widening dangerously again.

Imports for the period were at an annual rate of only \$11-billion, down \$700-million from last year's total. If both exports and imports continue through the year at this rate, our export surplus on merchandise account would be \$3.9-billion.

Add an expected U.S. surplus of \$700-million for services such as shipping, and you get a 1952 dollar gap of \$4.6-billion. Last year it was \$3.3-billion.

• **The Hitch**—The trouble will come in financing such a surplus. Since 1945 our export surplus has been covered by (1) U.S. loans or economic aid; (2) private investment abroad plus private remittances, and (3) liquidation of foreign gold and dollar assets (chart, above). But this year U.S. economic

aid will be down and so will the flow of private funds abroad. That probably means one of two things: Either foreign countries will cut their buying during the second half of 1952, or they will have to use up some of their scarce gold and dollar assets. If it's the second, then more import curbs are bound to come next year. It was the fact that the sterling area and Brazil ran down their gold and dollar reserves during 1951 that made them restrict imports of U.S. goods.

It is the potential political effects of this continuing dollar problem that led Truman to ask for a new study of U.S. commercial policy. He fears that the protectionist trend in Congress will stymie the present U.S. policy of building up the economic strength of our allies, especially in Western Europe. It also threatens our policy of keeping them from trading with the Communist bloc.

It's obvious that Truman wants the U.S. to do more than hold the line on the tariff front. His real aim is to clear the decks for higher U.S. imports, and thus make a direct attack on the dollar problem. Otherwise he thinks the U.S. faces the prospect of (1) economic brawls that could shatter the political unity of the Atlantic alliance; and (2) a general world dollar shortage, once the



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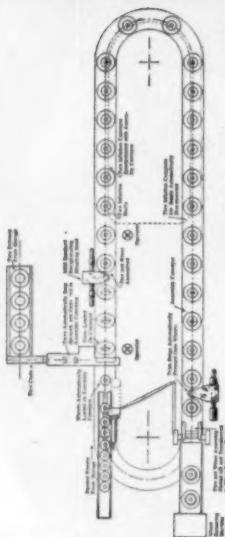
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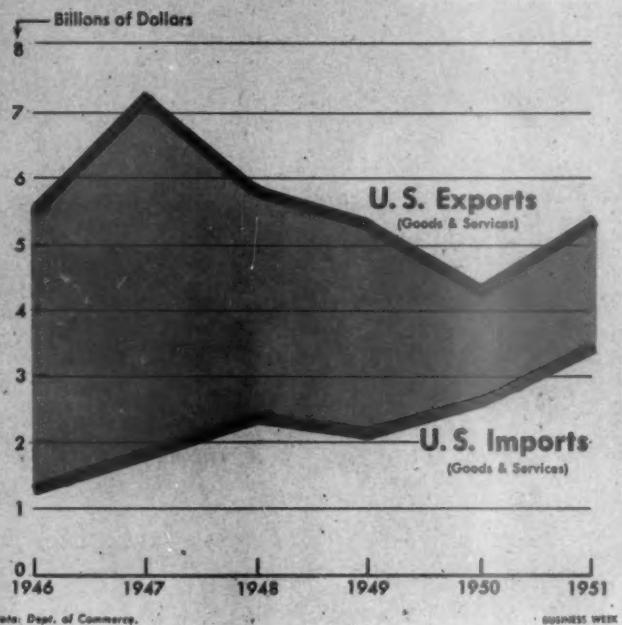
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### U.S. Trade with Western Europe (OEEC Countries)



U.S. defense program tapers off. That could hurt our relations throughout the non-Communist world.

### I. Exporters in Clover

For most U.S. exporters 1952 so far has proved a good year. That's especially true for producers of capital goods and chemicals.

Take machinery and vehicles. As the supply situation in the U.S. got easier toward the end of 1951, U.S. producers began to catch up with their backlog of foreign orders. Exports were high during the first quarter. Then, in May, these items made the biggest gain of any export category. Foreign sales rose from \$478-million in April to \$553-million. There's still no sign of any slackening.

U.S. chemical companies wondered in January how they would fare this year. Competition from Europe, especially Germany and Italy, looked threatening. So most U.S. firms cut prices and went after the foreign market hammer and tongs. Result: Chemical exports for the first four months of 1952 were 7% above the same period of last year. May exports were at an eight-year high.

• **Big Inventories**—In manufactured consumer goods, the export business has been pretty much in the doldrums

since early 1951, mainly because inventories in many nations have been top-heavy. One estimate is that Brazil was overstocked this spring in all types of goods by \$250-million. But exporters of consumer goods now expect to hold their own. Some trade experts even predict a slight upturn in textile exports.

It's pretty clear why U.S. exports, over-all, have done so well this year. The dollar shortage abroad turned out to be selective rather than general. It has been pretty much concentrated in the sterling area, France, Brazil, Uruguay, and Argentina. However, the full effect of import cuts in some of these countries hasn't been felt yet.

• **Dollars Available**—Other foreign markets have been getting enough dollars—either from their sales to the U.S. or from the inflow of private American funds—to maintain or increase their buying of U.S. goods. And it's possible that a country like Brazil will come back into the market more strongly by the end of the year.

• **Steel Strike**—One big question mark in the whole foreign trade picture is the U.S. steel strike. If the strike lasts even two weeks longer, it is sure to change the export outlook for the rest of 1952. Capital goods would be in tight supply again in the U.S.

A prolonged steel strike would have



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its impact on the level of our imports, too. However, it's hard to figure the net effect. On the one hand, it would probably lead to renewed U. S. buying of German, French, and Belgian steel.

At the same time it would almost certainly cut imports of items like copper, lead, and zinc—the use of which declines with the use of steel.

### II. Western Europe's Deficit

The heart of the dollar problem lies in Western Europe. Our allies across the Atlantic are still running a large deficit in their commercial trade with the U. S. (chart, page 148). Last year it was \$1.9-billion—60% of the world's trade deficit with the U. S.

Western Europe's total dollar deficit was much larger. It had to dig up dollars to pay for what it bought from Canada, Mexico, the Caribbean, and some South American countries.

But U. S. economic aid practically covered the deficit last year.

This year Western Europe is running a slightly bigger deficit—and economic aid will be cut down drastically. So the question is whether off-shore procurement under the Mutual Security Program plus the spending of U. S. troops stationed in Western Europe will make up the difference. If it doesn't, some Western European countries will have to dip into their gold reserves again.

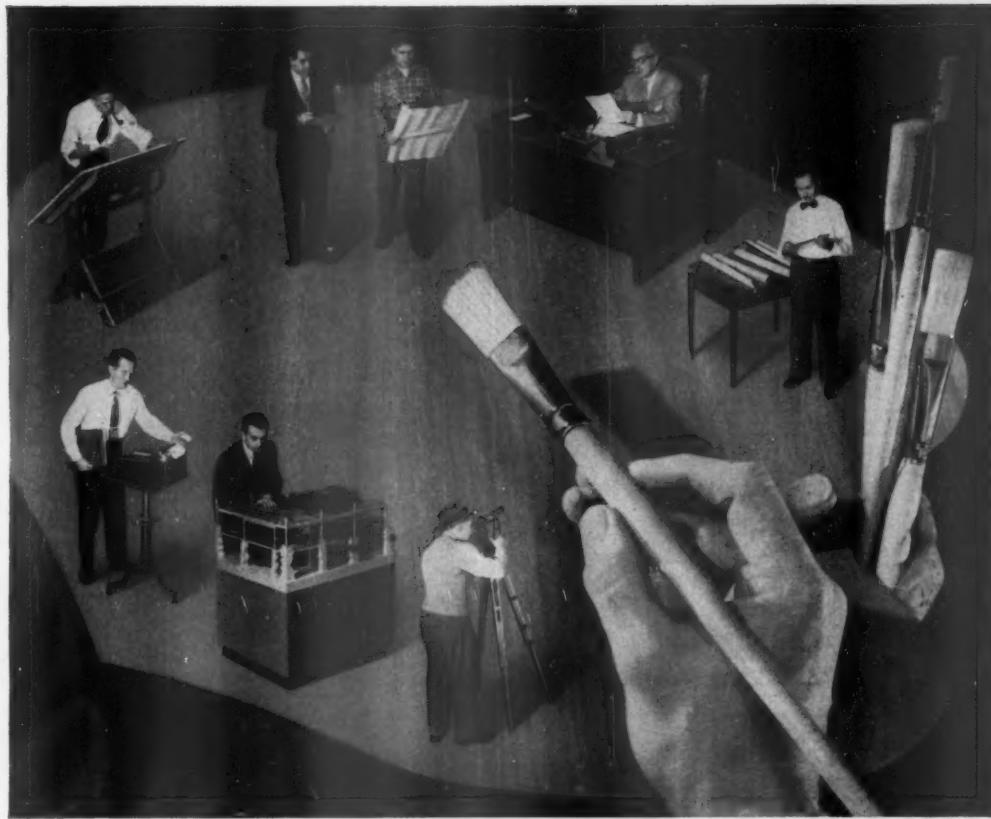
• **No Way Out**—No solution is in sight for this dollar problem. That's the big reason why Truman ordered his study of U. S. foreign economic policies. It's also the reason why MSA is now considering a revolutionary change in our economic relations with Western Europe. A blueprint calls for:

• A top Atlantic "joint management board" to integrate the economic policies of all the Atlantic allies. The board would consist of one representative from the U. S., one from Britain, and one from Western Europe.

• Under the top board would be committees to handle currency stabilization and stabilization of prices and supplies of basic raw materials.

Washington officials are worried, too, about the prospect of a world-wide dollar shortage when the U. S. defense program begins to taper off in 1954. Then, these officials say, demand for imports is sure to slacken in the U. S. There may be a lot more pressure to bar imports. At the same time, the U. S. will be piling up goods that it will want to sell abroad.

• **For the Future**—Still, for American exporters, these are problems for the future. Their business will be good this year. Even if the steel strike lasts a while longer, or if there are new import curbs in some foreign markets, total U. S. foreign sales are sure to be at least as high as last year.



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### Leading Motor Repair Shop is Sold on Klixon Protectors

CAMBRIDGE, MASS.: Paul Leicht, president of the Empire Electrical Company, specialists in fractional and integral motor repair, speaks from many years of successful experience.

"As one of the best equipped motor repair shops in New England, we've worked on all kinds of motors, operated under many different conditions. And we prefer motors protected with Klixon Protectors. Our experience has shown that they prevent burnouts due to overload and voltage conditions, and reduce unprofitable type repairs. Yes, we're sold on Klixons. We find they help our business."

The Klixon Protector, illustrated, is built into the motor by the motor manufacturer. In such equipment as refrigerators, oil burners, washing machines, etc., that keep motors working under poor conditions. If you would like increased customer-preference, reduced service calls and minimized repairs and replacements, it will pay you well to ask for equipment with Klixon Protectors.



**Klixon**  
Klixon Protector

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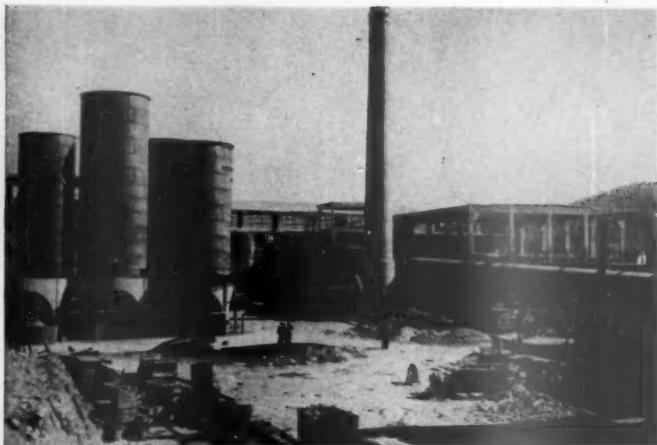
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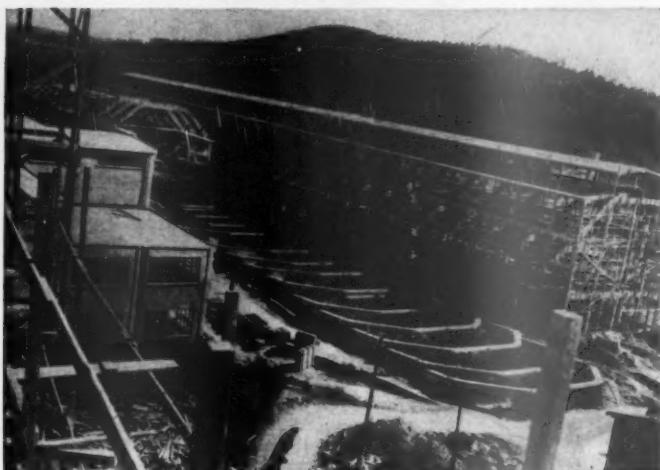
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### New Plants Dot the Landscape as . . .



### . . . Brazil Boosts Aluminum Production

Brazil will soon be supplying its own needs for aluminum. By late next year a 10,000-ton-a-year aluminum plant will be in operation at Aluminio, 50 mi. west of Sao Paulo, Brazil's big industrial center.

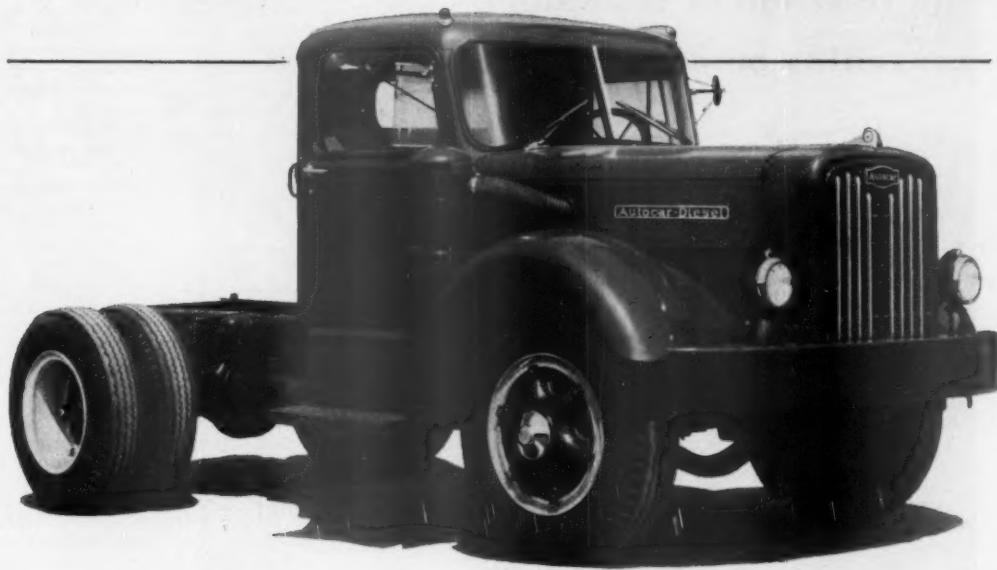
Cia. Brasiliera de Aluminio, the Brazilian-owned company which is building the new plant, had hoped to start operations back in 1941, but the project had to be shelved until after the war. Now construction is well under way (pictures). About 50% of the machinery has been installed.

The Aluminio plant will have facilities for producing both ingots and finished aluminum products. Its eight

units include an extrusion and rolling mill with a yearly capacity of 10,000 tons; an 80-ton-a-day aluminum oxide plant; an electrode manufacturing plant; a wire drawing and electric cable plant with a daily capacity of 5 tons; and an aluminum products and utensils plant that turns out almost 4 tons of goods a day.

• **Long-Range Expansion**—The initial production goal—10,000 tons a year—is just about the amount of aluminum that Brazil now imports. At present the only domestic producer is the Canadian-controlled Cia. Eletro-Quimica Brasiliera factory at Ouro Preto, which produces about 2,000 tons of ingots per

# NOW...The Autocar Diesel "65"



## A new, low-weight Diesel-powered tractor

Here's the year's most important news in highway transportation: a new lighter-weight Diesel engine installed in the new lighter-weight "65" Autocar tractor.

The Diesel engine is new from fan to flywheel. Features include 150 hp., 401 cu. in. piston displacement, and, most interesting, a weight of only 1,545 pounds—almost 1,000 pounds lighter than the next Diesel in the Autocar line! As for the tractor, it employs many features which reduce weight, yet in no way at all impair the strength and stamina traditional with Autocar.

Over-all weight of tractor and engine: only about 10,000 pounds!

This is just what the highway hauling industry desperately needs.

See this new, low-weight Autocar-Diesel today at your nearest Autocar Branch. It brings a more favorable

basis for figuring costs against earnings to freight haulers, petroleum haulers, milk haulers—every highway operator whose extra payloads mean extra profits.



White Bros. Milk Company, Quincy, Mass., have just taken delivery of this new Autocar-Diesel "65." It is powerful yet light enough to assure profitable loads.

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To those faced with management problems, on which outside counsel may prove helpful, we offer a copy of this booklet. Write us—on your business letterhead, please—for a copy of "Consulting Service for Management".

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year. Several years ago Electro-Quimica bought out a plant at Utinga where it plans to set up a rolling mill, but so far it hasn't announced any other expansion.

CBA is not going to stop at 10,000 tons. Its expansion program calls for annual production of 15,000 tons by 1957. This will be stepped up gradually until it reaches 50,000 tons in 1965. In all, the Aluminio project is expected to cost about 1-billion cruzeiros. CBA plans on entering the export market only after filling all Brazilian needs for the metal.

• **Home Products**—Most of the raw materials to be used at Aluminio will be of Brazilian origin. CBA has its own high-grade bauxite deposits at Pocos das Caldas, about 125 mi. due north of Sao Paulo. Petroleum coke will be purchased from the government refinery at Santos, caustic soda from the new Nitroquimica plant at Sao Miguel, and pitch from the government-owned Volta Redonda steelworks.

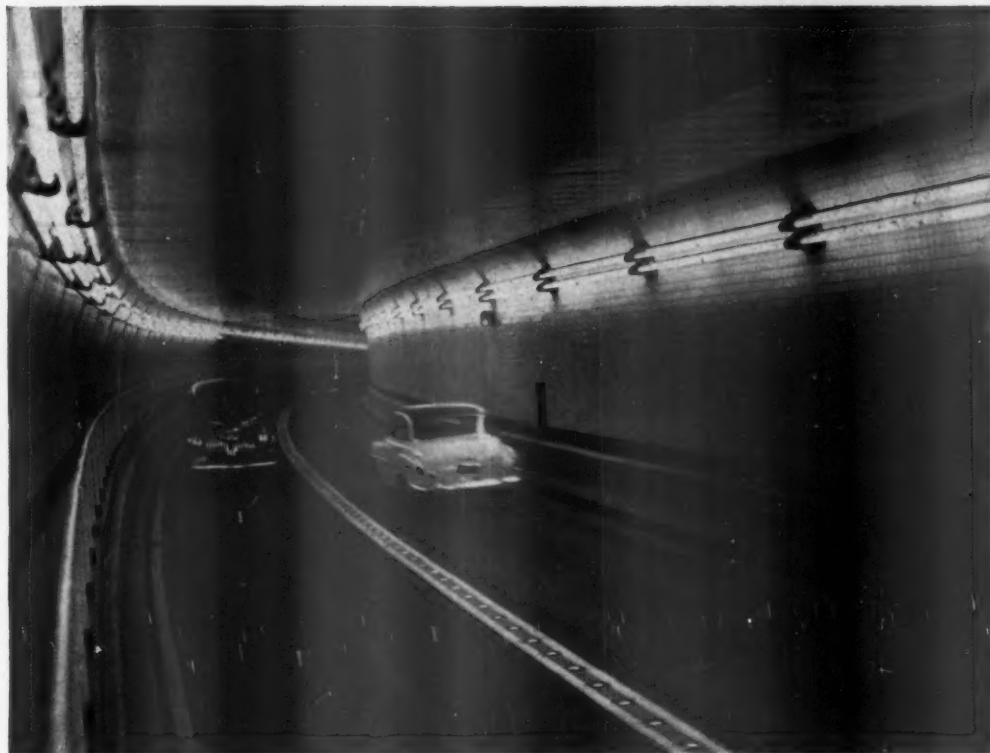
CBA will buy its power from the Sao Paulo Light & Power Co. until its own 240,000 hp. hydroelectric plant on the Juquia river is completed.

• **Combine**—At the head of CBA is Brazilian industrialist Jose Ermirio de Moraes. He is director of S. A. Industrias Votorantim, a huge combine that includes one of Brazil's largest cement plants and a string of textile factories, and of Cia. Nitroquimica Brasiliera, a multimillion dollar chemical company.

Financing has been completely private—no shares have been floated on the open market. At present CBA has a paid-up capital of 60-million cruzeiros (about \$1-million).

An Italian firm, Projetaziano Sciacca e Piancentini, designed the factory and is supervising its construction. Brazil has supplied about 25% of the construction materials, with nine countries—Britain, Denmark, Switzerland,

**The Pictures**—Cover by Dick Wolters. Ackroyd—64, 65; Associated Photographers—32, 33; U. S. Air Force—171 (top ctr.); Camera Clix—128, 130; George Eastman House—78, 79; Ford Motor Co.—58; The Glenn L. Martin Co.—28; George Harris—162 (top), 163; Int. News—30, 92 (bot.); Bob Iscar—126 (bot. lt.); Sid Karson—94; McGraw-Hill World News—152; Machinist Photos—106 (bot.); U. S. Navy—171 (bot.); Jim Nelson—82, 126 (ctr. lt. bot. rt.); Press Picture Service—116; Republic Aviation Corp.—106 (ctr.); Dick Wolters—92 (top), 93, 126 (top); George S. Woodruff—48, 49.



## The Tunnel That Was Fleeted 180 Miles

They didn't "hole through" the Elizabeth River Vehicular Tunnel in the usual way. This tunnel, which connects Portsmouth with Norfolk, Virginia, was built in a shipyard, then towed 180 miles to the construction site and sunk into a trench across the bottom of the river.

Seven huge double-shelled steel tubes, each as long as a football field, were built on the shipways at Bethlehem's Sparrows Point Shipyard, near Baltimore. The tubes were plugged with watertight bulkheads so they would float. Then they were launched like

ships and towed down the Chesapeake Bay to the Elizabeth River.

When each tube arrived at the tunnel site it was lined with concrete while it was still afloat. The concrete roadways were poured inside of the tube and the completed unit was sunk into position. Each tube was then joined to the end of its neighboring tube on the bottom of the river until all seven formed a continuous tunnel section.

Although this is not the first vehicular tunnel to be built by this method, construction of the tunnel tubes in a shipyard is an interesting example of adaptation of facilities to work of a highly special character.

General contractors were Merritt, Chapman & Scott Corporation, New York.



One of the 300-ft steel tunnel sections starting on its voyage down Chesapeake Bay. Seven of these sections were fabricated at Bethlehem's Sparrows Point shipyard, near Baltimore, and were towed to the tunnel site at Norfolk, Virginia.

**BETHLEHEM STEEL**



Do I understand that we're getting 3,600 additional new freight cars to build up our service to shippers?"

That's correct, young man, and at a cost, incidentally, of more than 27 million. Included in the new cars are—

- 500 covered hopper cars for bulk commodities requiring closed-car transportation.
- 500 hopper-bottom cars that can be used for coal, ore, sand, gravel and similar shipments.
- 500 livestock cars of which 400 are double deck.
- 500 ore cars equipped with roller bearings, especially designed for ore shipments.
- 500 52-foot gondolas for steel, coal, gravel or any open-top commodities.
- 100 65-foot gondolas, with drop ends, for handling excessive length shipments.
- 500 all-purpose, 50-foot automobile cars with special nailable steel floors designed to withstand heavy loading.
- 500 all-purpose, 40-foot box cars of 50-ton capacity.

This extensive building program is planned for completion during 1953. Thus, Union Pacific keeps abreast of shippers' requirements for adequate, dependable transportation.

**Be Specific - Ship "Union Pacific"**  
 (Offices in 70 cities throughout the U. S. A.)

Belgium, Italy, Germany, Sweden, Canada, and the U.S.—providing the remainder.

The plant will employ about 1,000 workers, a relatively small labor force to turn out the amount of metal planned. This was made possible by several engineering innovations. For example, the 54 electrolytic furnaces were built to make the replacement of the inner unit simpler and faster.

#### BUSINESS ABROAD BRIEFS



An 86-ton generator, said to be the largest of its kind ever produced in the U.S., will help Chile boost its nitrate production. Made for Anglo-Lautaro Nitrate Corp., by General Electric Co., the 5,750-kva. generator (and its twin) will be powered by 8,950-hp. Nordberg diesels, themselves among the biggest ever built for the purpose.

Hjalmar Schacht, onetime Nazi financial planner, may have received a call from Teheran. Newspapers there say that the German economic consultant (last job: Indonesia) has been asked to try to straighten out Iran's sorry fiscal situation.

Washington has upped the ante for South African uranium. Export-Import Bank lent \$19.6-million to Electricity Supply Commission of South Africa to increase power supply for uranium plants there. Ex-Im had already advanced \$35-million to South Africa.

Number one position in India's foreign trade goes to the U.S. Total Indian-U.S. trade came to \$754-million in the 11 months ended in February, while Britain dropped to second place with \$671-million. During the period we bought \$238.6-million worth of spices, tea, manganese ore, lead, mica, burlap, cotton, and wool from India.

# X-ray diffraction...the GE way... takes the guesswork out of chemical analysis

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heavy duty generators, voltage regulators and magneto—has long been a symbol of dependability in construction, as well as many other fields.

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# INTERNATIONAL OUTLOOK

BUSINESS WEEK

JULY 19, 1952

A

BUSINESS  
WEEK

SERVICE

Stalin must act soon if he wants to block West German rearmament.

Otherwise, ratification of the German peace contracts and the European Defense Community is a sure thing this fall. Chancellor Adenauer has just got a preliminary O. K. from the Bonn parliament by a big majority.

The Kremlin may show its hand when it replies to the West's latest note on Germany. In that, the U. S., Britain, and France proposed low-level, four-power talks on East German elections.

Stalin knows that the West won't put up with stalling tactics. To get anywhere in Germany now, Moscow must say yes to the West's proposal.

•  
The State Dept. is trying to figure the latest world-wide shift in the Communist party line.

A new tune was sounded last week at the Communist "World Peace" meeting in Berlin. It's a "popular front" line that calls for postwar cooperation with non-Communist groups.

French and Italian Reds are busily plugging the new policy. Communist leaders in Burma and Indonesia this week took up the same theme.

It's too early to tell what the shift means or how far the Kremlin will push it. In Washington, the guessing goes this way:

- It's a tactical retreat with no global strategic importance. Moscow merely wants to keep its local Communist parties alive.
- It's another dodge to confuse and divide Western Europe on the German rearmament issue.
- It's the prelude to a real Kremlin effort to relax world tension. Solid concessions will follow, perhaps in Germany, Austria, or Korea.

•  
The U. N. has made the Chinese Communists a new proposal for ending the Korean war. It hinges on the war prisoner problem.

In Washington the contents are top secret. But around U. N. headquarters in New York, the rumor is this: The supervision of prisoners will be turned over to a new international body or to a nonbelligerent nation like India. This could be done under a provision of the Geneva Convention.

•  
Washington now thinks the chances for a truce are at least 50-50. Back of this optimism are two assumptions:

(1) The Communists really want a truce in Korea. Our recent air blows not only hurt militarily but disrupted civilian life in North Korea pretty badly.

(2) The enemy knows that the U. N. has made its last concession.

•  
There will be a further stretchout in Britain's defense program. It's part of Chancellor Butler's "save sterling" program (BW-Jul.12'52,p147).

Recently British defense spending has been accelerating at a fast clip. So Butler wants to slow it down. By keeping it at the present rate, he can free some industrial capacity for export.

You can also look for more British import cuts plus a further squeeze on home demand—especially in the field of subsidized housing construction.

# INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK  
JULY 19, 1952

Until recently Butler hoped to balance the sterling area trading account without this extra dose of medicine.

But the continued slump in raw material prices killed his calculations. The sterling area countries in southeast Asia have been hit by dropping prices for their main export products—jute, rubber, tea, copra.

India and Pakistan are readying new import cuts. But these alone won't offset the loss in export earnings. So Britain has to make another cutback, too.

The Eisenhower nomination has put a fresh head of steam behind French plans for a European political federation.

Paris considers the general the strongest American backer of European union. It figures his nomination guarantees U. S. help for France's federation schemes—even if the Democrats win the election.

Foreign Minister Schuman will get the ball rolling at a Paris organization meeting of the six Schuman Plan nations. He'll ask them to agree to the creation of a political authority within the Schuman Plan framework.

Britons and some continentals—especially the Dutch—are afraid Paris is rushing into premature political federation.

But union advocates, like Schuman and French planner Jean Monnet, have a big majority of the French cabinet behind them. They argue federation now will:

- Improve chances of ratification of the European army agreement both in France and in Germany.
- Bolster the Schuman Plan and the European army—if approved—during their difficult beginning periods.

Washington is almost set to announce the first real move to coordinate European aircraft production.

The plan is to boost output of three different British planes by enlarging and linking production facilities in Britain, Italy, and the Netherlands. The U. S. would buy the planes for the NATO air forces with offshore procurement dollars.

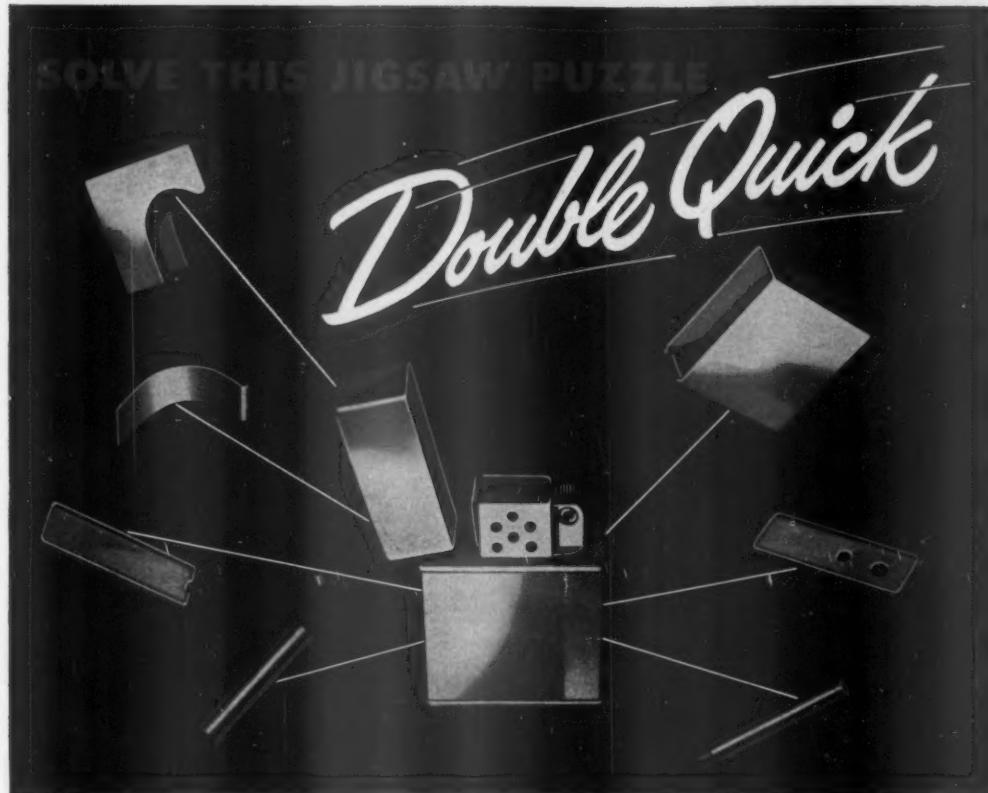
NATO officials in London are waiting on final Washington approval before drawing up specific contracts. About \$220-million is involved, plus an equal amount in European currencies. The U. S. contribution is tied to two conditions—that the planes be delivered by the end of 1955 and that no scarce tools are needed from the U. S.

But the program isn't rolling yet. The Defense Dept. is haggling with the Mutual Security Agency over details. It could be six months before the contracts are let.

The Iranian parliament has stopped Mossadegh's bid for dictatorial powers. It turned thumbs down on his plan for keeping Iran solvent by cheapening the currency and soaking the rich.

But there's still no sign that Mossadegh's grip is weakening. He may be able to bull through his new economic policies.

Washington frowns on the aging premier. But it admits that if he could make a tough tax policy stick, Iran would benefit. That way, the country might have a more up-to-date fiscal program if oil revenues started coming in again.



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## REGIONS



OLD: Some of the worst of St. Louis' 280,000 substandard dwellings lie next to slum land cleared for 1,736-unit Pruitt development (rear).



NEW: 704 families will eventually find clean new homes in Cochran apartments. Project is for whites, Pruitt for Negroes.



ON ONE SIDE, squalor; on the other, new homes are coming.



FIRST TENANTS have already moved into Cochran project.

## St. Louis Attacks Its Slums

Last month a St. Louis shoemaker and his family of six moved into a bright new four-bedroom, \$46-a-month unit in the Cochran Apartments. Since then a steady stream of refugees from the city's slum have been pouring into the low-cost public housing project, which will eventually shelter 704 families.

It's the first massive postwar step in St. Louis' attack on a slum problem that is older and worse than most cities are facing, yet it is typical of the enormous difficulties that all cities face in eradicating their blighted areas.

• **Blighted**—Most of the Cochran dwellers will come from buildings being torn down in other slum clearance projects. For St. Louis is a city very conscious of the spreading rot of its slums and blighted areas; some housing experts put the city at or near the top for effort at self-improvement.

It really needs to be. A survey based on 1950 census figures shows that 39% of all St. Louis dwellings are substandard—the highest rate among the nation's 12 biggest cities. Among the 280,000 substandard dwellings, about 33,000 depend on outside privies,

another 25,000 on communal toilets.

Take another look at that figure of 280,000 substandard dwellings. Compare it with what has been done to heal the ill. Prewar and postwar, when the Cochran Apartments are completed the city will have provided 2,019 public housing units. Add on to that everything that is started, or is on the drawing board, or is one jump beyond the hope stage, and you get 8,085 units for 280,000 families that in some degree or other need better shelter.

• **An Old City**—St. Louis' slum problem is not just bad, it's also very old. It's an old city, by Midwest standards—founded in 1774. The troubles began during the Civil War, when there was a huge influx of Negroes.

Even in those days, the city had much its present shape, only smaller. A bend of the Mississippi, bowing outward, formed the eastern boundary of an oval whose long axis lies north and south. Today the business and civic heart of the city lies west a bit from the river, in a rough square. Closely ringing the business core in the old days, was the residential area.

With the Civil War influx, the well-

to-do families began moving outward from this residential belt. Negroes and some poor whites filled the vacuum.

• **War Jobs**—This process continued steadily through the years, stepping up tremendously during both World Wars when new industrial jobs brought in thousands of workers, predominantly poor whites.

By the end of the war the St. Louis pattern was pretty well fixed. The well-to-do kept moving farther and farther out—frequently clear beyond the city limits into suburbs. Into the homes that they vacated moved people of the next lower financial category. At each level, houses were allowed to deteriorate. The process extended clear down to the crumbling tenements that ringed the central area. Here the poorer newcomers found something that passed for shelter.

Not all St. Louisans were blind to the slums. In 1907 a citizens' group offered a development plan designed to check the spread of the slums. But no one paid any mind to the local Cassandras.

Finally, in 1918, the city adopted a zoning plan—only to have it declared



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unconstitutional five years later. A second plan, adopted in 1926, was badly watered down.

• Clearance—In 1923, the city passed an \$87-million bond issue for public works. Slum clearance got \$8.6-million of this, and dilapidated buildings were cleared from two areas close to the central district. No new low-cost housing replaced what was torn down.

St. Louisans of the 1930s were worried more by the commercial than the residential slums. As the modern commercial center slid back from the river it left a strip, several blocks wide, of hopelessly rundown buildings. In 1935, the city bought this strip.

The whole strip was leveled, and there were grandiose plans to fill the 41-block area with a colossal monument. Nothing has come of these decorative dreams, and the area currently contains a huge and very useful parking space, a few trees, and a handful of historic buildings that survived the shambles.

In 1939, a federal housing official dropped in on a routine mission of viewing-with-horror and telling the city that federal money was available for public housing. A year later the city got going, and two projects—one for Negroes, one for whites, in this segregated city—were completed just before Pearl Harbor.

• Postwar—By 1949, the city was ready to buckle down again to the housing problem.

Spurred on by a new and housing-minded Mayor, Joseph W. Darst, the attack took three forms:

- Public housing, with all possible federal aid.
- Urban redevelopment, with local capital and federal help.
- City ordinances, aimed at zoning and minimum housing standards.

In the public housing drive, the Cochran Apartments will be ready for full occupancy by the end of the year.

Last May, a second and larger project was started. It will provide 1,736 apartments and is named for Capt. Oliver Wendell Pruitt, a Negro fighter pilot killed during the war.

The St. Louis Housing Authority is working on other projects. Two-thirds of the parcels of land have already been bought for a site next to the Pruitt apartments. It will have 1,114 units, for whites. Not quite so far along are plans for another 1,668-unit project for Negroes. And another 1,548-unit project for whites is still pretty nebulous. All but the Pruitt apartments are up against the difficulty that Congress is dealing out public housing funds with a very hesitant hand.

• Private Group—Urban development has been pressed vigorously, but has run into startling snags. Take the case of the 68 businesses and individuals who pledged \$2-million to the Urban De-

velopment Corp. The group's pet project is to redevelop a nine-block area lying between two already-cleared parks on Market Street, a principal east-west thoroughfare bounding the business district on the south. URC wants to put up apartment buildings, mostly with small units designed to rent at \$75 to \$90 a month. It figures that people with children want to live farther out; these apartments would be for very small middle-class families. The project is strictly free enterprise, though government aid would mean an 8% ceiling on profits.

• Snags—The difficulties are tremendous. To start with, the land would have to be purchased or condemned by the city's Land Clearance Authority. The Authority, once it got and cleared the land, would sell it to URC. Here is one place where federal help comes in: The price could be less than the cost to the Authority. Washington would pay two-thirds of the difference, the city one-third.

Government help would also appear in tax abatement. No taxes would be levied on improvements for 10 years, and only 50% taxes for the next 15 years. With that boost, URC thinks it could complete the more than \$30-million job with its own money plus government-guaranteed loans.

All sorts of unexpected obstacles cropped up. Attempts were made in the State Legislature to cripple the bill authorizing the Land Clearance Authority. Then an alderman, feuding with the Mayor, managed to hold up for months the city ordinance creating the Authority.

At this point, another alderman, in whose ward the area lay, balked. His adverse vote would have killed the measure, under local ground rules. The alderman, a Negro, said that his constituents had protested that they were being driven from their homes to make way for middle-income white families. Mayor Darst eventually persuaded him to withdraw his objection.

Next unexpected foe was the CIO's Industrial Union Council which protested because the proposed apartments were too small for children. This opposition finally simmered down. As of now, final plans for the project are being prepared.

• New Laws—On the legislative front, the city has adopted a new and somewhat stronger zoning ordinance, but this of course affects future building only. A minimum housing standards act has also been passed. Whether this will be enforceable is another matter. Slum landlords might easily prefer to board up their houses rather than spend money for even minimal improvements. And, with rent ceilings, it is even doubtful whether a landlord could be enforced to make expensive alterations.



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clues



### NEW HARBOR DEVELOPMENT GIVES MEMPHIS

## New Boom on the River

The New York of the South. That was Memphis' dream back in the heyday of the steamboat. Ideally set for river commerce high on the Chickasaw Bluffs at the head of deep-water navigation of the Mississippi, Memphis was the most promising port in the South. Even that colossus of commerce, New Orleans, eyed her with alarm.

Somehow that dream never quite came off. Inadequate harbor and river terminal facilities have left Memphis almost without benefit from the river since steamboat days.

Today Memphis has new visions of industrial growth, and something solid to back it up. A big harbor development is under way that will give the city a new 500-ft-wide, 12-ft-deep, current-free backwater channel and some 7 mi. of industrial water-frontage (map). Before long smoke will begin to pour from the stacks of new factories on the first 360-acre tract ready now on Presidents Island.

• **One-Product Town**—Child of cotton, Memphis was the largest inland cotton market in the U.S. in the 1830's. In a

single decade it had grown from a simple flatboat town that subsisted by bartering with Indians and flatboatmen to a complex river metropolis.

By mid-century Memphis saw that it could no longer live on cotton alone. If it were to grow to be really large it would have to turn to manufacturing. A system of factories and railroads sprang up—spurred largely by the cotton interests.

• **A Long Way**—Memphis had come a long way from the days when its houses were mere log cabins and when bears occasionally roamed the streets which were full of holes so deep that an ox team is said to have drowned in one on the main street.

But Memphis seemed destined never quite to reach her goal as the manufacturing metropolis of the South. Panics, the Civil War, political and social turmoil all took their toll.

Until World War II, Memphis held her own. Since the war things have happened fast. Manufacturing employment has doubled in the past 10 years. Heavy industry has moved in and

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manufacturing activity runs the gamut from aircraft parts to pianos.

• **Rebirth**—Memphis again has hopes of becoming the industrial giant she dreamed about, when the harbor development is completed. Civic and political leaders call it the most important thing that has happened to the city since the stamping out of yellow fever.

When the project is finished, sometime in 1956, Memphis will have an industrial area 2½ times the city's present 3,000 acres of industrial development. The 360 acres that are ready now are part of 960 acres being developed on Presidents Island; when the second tract across from it at Ensley Bottoms is opened, a total of 7,800 acres will be available.

• **Action**—Memphians have been clamoring for years for a new still-water harbor. It wasn't until 1945 that the Memphis Chamber of Commerce's harbor committee decided the matter should be settled once and for all.

Just at that time Gen. Max C. Tyler, U.S. Corps of Engineers and president of the Mississippi River Commission came along with the plan for damming off the Tennessee Chute—a secondary channel that carried about 20% of the river's flow after it swept past Memphis.

• **Big If**—The big question was: Would Memphis and Shelby County supply the land and put in the necessary improvements to justify the government's expense?

Political leader E. H. Crump thought they would. He got the support of the state administration and some members of Congress. The bill went through and work on the development started in May, 1948.

• **Just the Beginning**—The 360 acres completed is just one-third of the land that will be filled in on Presidents Island. The Ensley Bottoms tract, the lion's share of the new industrial acreage, won't be started until all of the island is developed. The city and county jointly own the land and are matching the government's \$21.6-million expenditure with an estimated \$28.6-million.

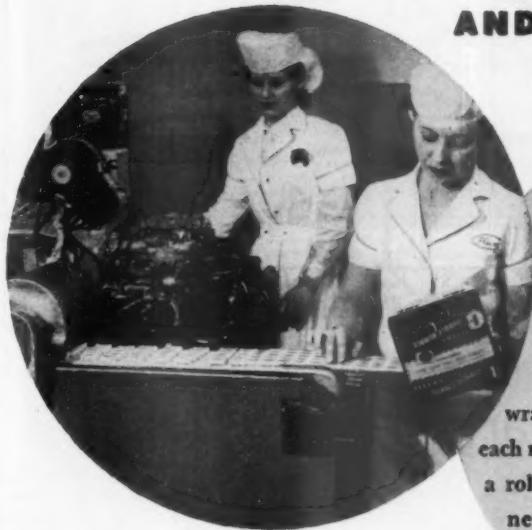
Sinclair Refining Co. plumped down \$50,000 for the first site—close to 10 acres. About 30% of the tract has been sold or is being negotiated.

• **Boon to All**—Nearly everybody in Memphis will benefit from the development. Plants using river transportation rather than rail save around \$1.60 per ton on the various steel, petroleum, agricultural, chemical, and other products that come into Memphis, according to the Memphis Freight Traffic Bureau. Small concerns who want shipments in less-than-barge-load lots will benefit from the \$12-million worth of dock and public terminal facilities the port commission has built or will build.

# They doubled the bubbles



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Take a schoolma'am's dim view of bubble gum if you want to. But never underrate a penny in the confectionery plant. Or in the meat plant. Or in the brewery, the bakery, the cannery, the dairy. That's where they figure profits in fractions of cents. And they know there's no profit today without *food engineering*. Packages, ingredients, processes, handling methods, physical distribution — all are being up-dated. This makes food plants the third largest modernization and replacement market among manufacturers (and a market for \$20 billion

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Fleer has doubled the bubbles-per-minute and held the penny price.

worth of materials, parts, containers and supplies each year). It's a steady market . . . in the next few years one of the steadiest in all industry, according to a recent survey of buying plans.

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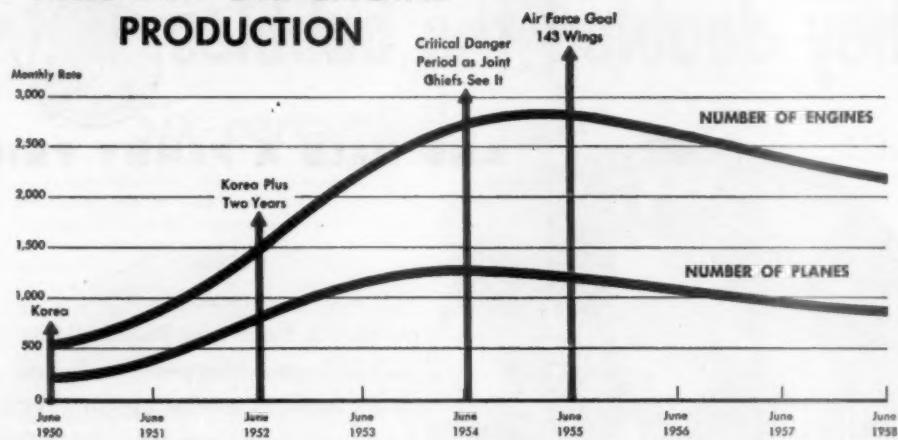
— and which, under its new name and editorial formula, is showing a substantial gain in advertising pages.



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Common denominator of the food industry

## AIRCRAFT and ENGINE PRODUCTION



## OUTPUT CATCHES UP TO REVISED SCHEDULES:

## Aircraft Buildup Starts Paying Off

Three times since Korea, the arms planners have increased the projected size of the nation's air power (chart). Three times they've lengthened the time the buildup is to take; each time they cut their target for monthly rates of production. Now, finally, the industry's output of military planes is beginning to match the mobilizers' goals. Barring strikes, deliveries in 1952 will hit their quota for the first time since mobilization began.

You can see now that the swiveling is about over:

- After some backing and filling, Congress last week passed the Defense Dept.'s 1952-53 appropriations, including nearly \$16.6-billion for aircraft.
- After two years of specifications rewriting that drove manufacturers wild, the Air Force and the Navy have settled on the types of planes they want (pictures, page 171).

- Probably most important, production capacity has been built up despite growing pains. It is now ready to produce at new high postwar levels.

- **What We've Done**—For a program that's been yanked around so much and so widely criticized, the aviation buildup really hasn't done badly.

Korea caught us with our aircraft plants down. Talk in 1948 of replenishing our air fleets hadn't got very

far. In mid-1950 we were still ambling along, producing about 200 new planes a month.

In the two years since Korea, we've turned out about 9,000 planes at a cost of about \$25-billion. The fiscal 1953 allotment of nearly \$16-billion brings aircraft procurement to about half of all the hard-goods money voted since Korea—and there's another \$30-billion or so to come by 1957.

In numbers of planes, our air strength has gained little, however. Of the 9,000-plane total, only about half are combat types. We've shipped about 2,000 combat planes to NATO's European defense forces; we've lost nearly 1,400 planes in combat over Korea. Noncombat and accidental losses soak up most of the remainder.

What we have gained is production capacity. And that will weigh in with more and more impact as the months roll by.

- **Shifting Goals**—When the Korean War erupted, the first impulse of mobilizers was to try to multiply our 200-a-month output by ten or more. The Pentagon's first plan of September, 1950, called for about 2,500 planes a month by the end of 1952.

The airframe people groaned a bit at this acceleration, but the jet engine makers really screamed. Both reason-

ing and experience quickly proved that you can't step up jet engine production anywhere near that fast. Within six months the "unrealistic" schedules were modified. The new target was 1,800 planes a month, to be reached by September, 1953.

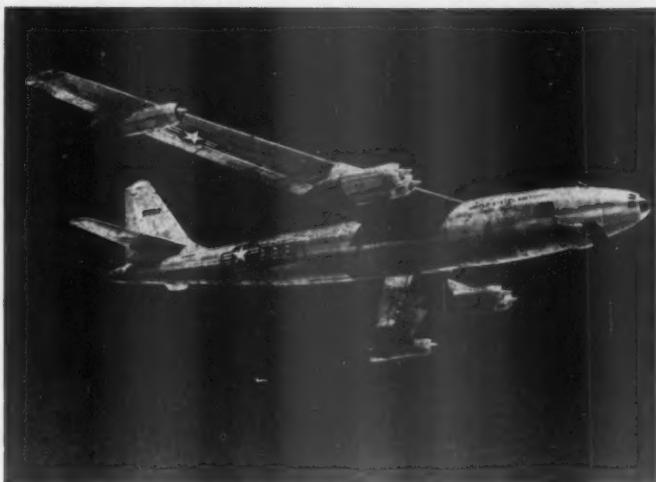
This would have given us our 143-wing air force (BW—Sep. 22 '51, p91) by the summer of 1954—the time picked by the Joint Chiefs of Staff as the period of greatest military danger.

Then came orders from the White House to cut that already-revised program by one-third—to cut the former production goal of 1,800 planes a month by September, 1953 to 1,250 (BW—Jan. 12 '52, p19).

- **More Wings**—With each change in the buildup pace came an increase in the projected size of the air fleets. The 1950 program called for 58 wings in the Air Force. The 1951 plan provided for 68 wings. It was later increased to 95 wings and, last January, to 143 wings.

Right now, our Air Force stands at about 90 wings, only half equipped with postwar jets. The other 45 or 50 wings are flying World War II aircraft.

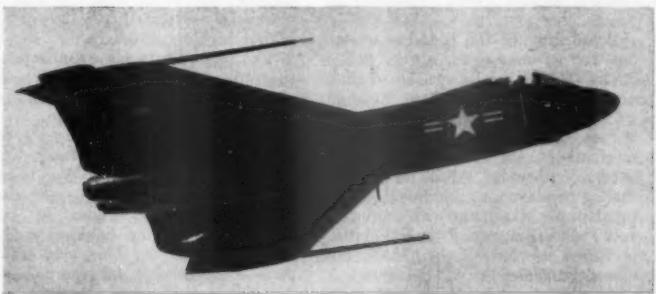
The Navy air arm is no better off. Reasonably accurate guesses put the number of planes at about 10,000, most



**STRATOJET**, Boeing's B-47, is the workhorse medium bomber of the Air Force. Some are already in Korea. It's powered by six GE J-47 jet engines, flies 3,000 mi. at 600 mph.



**SABRE** has been picked as first-line land-based fighter, flies at 650-plus mph. It's not much larger than the wartime P-51 but it's 2½ tons heavier, 20 times as gadgeted.



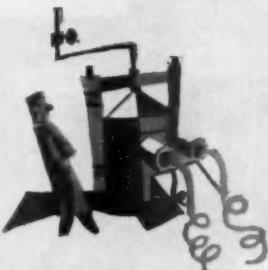
**CUTLASS** is a topnotch Navy fighter, as fast as the Sabre. Built by Chance Vought, it is powered by two Westinghouse J-35 turbo jets, each rated at over 3,000 lb. thrust.

of which also are older wartime models.

If you allow 15,000 planes for the 90-group Air Force and 10,000 for the Navy, you can see a total of 25,000 military planes. In comparison, Russia is reputed to have 30,000 planes,

mostly postwar types. These are distributed as follows: 20,000 along the Iron Curtain, 2,000 along the Yalu River in Korea, 3,000 in reserve in Manchuria, 5,000 in reserve at home.

The disparity in favor of Russia's



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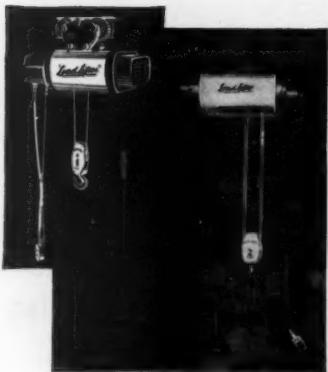
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postwar aircraft industry is less than the figures show. Russia has concentrated on lighter, easier-to-build fighter planes such as the MiG (BW—Jul. 12'52, p30), while we've built more complex bombers and fighters. In weight of output, the U.S. can come close to matching the Soviet Union.

• **Factories vs. Planes**—In keeping pace with Russia from here on, U.S. mobilizers count on a crescendo of production from our expanded factories. Their policy has been built on three points:

• Expansion of the capacity of the aircraft industry itself.

• Broadening of the industry's base by drawing in other contractors and subcontractors, such as the auto and appliance people.

• Going relatively slow until the military brass was willing to freeze designs for mass production.

The underlying philosophy is this argument: "Production capacity is more important than production. Once a factory is able to roll out weapons, the factory itself becomes a much more significant weapon than the ones it produces" (BW—Mar. 29'52, p19).

• **Booby Traps**—The way to sufficiency didn't run smooth. Each point of the mobilizers' plan was booby-trapped:

Expansion was made doubly difficult by the shifting of production targets. A good example is the experience of Fairchild Engine & Airplane Corp. of Hagerstown, Md. (page 92). Last summer Fairchild got a \$12-million contract to open a government standby plant at Chicago and run it with 900 employees. The company sent top-flight production men to start things rolling. Five months later the stretch-out order shut the standby plant again. Gone were the \$12-million contract, the sacrifice of Hagerstown efficiency to get Chicago going, five months of salaries, tooling costs, readiness expenses.

Broadening of the base has worked out well in some cases, not so well in others. J. H. Kindelberger, board chairman of North American Aviation, stumped the country four years ago to stir up new sources of all the electro-mechanical gadgets a modern plane needs. William M. Allen, president of Boeing Airplane Co., says Boeing's B-47 program is working fine with more than 1,100 subcontractors. Pratt & Whitney is happy to have Ford, Nash, and Chrysler making P&W jet engines.

At the same time, many industry officials blame the base-broadening for bringing too many inexperienced shops into the field, spreading the available tools too thin, multiplying the headaches of scheduling components to reach the assembly line at the right time. They blame this policy partly for the number of otherwise finished planes—estimated as high as 400 Air

Force and 300 Navy planes—that are standing on manufacturers' ramps waiting only for engines or special electronic devices.

Major blame, however, is laid at the door of mobilizers who encouraged airframe makers to rev up their assembly lines while jet engine and electronics production fell further and further behind. Right now, General Electric's high-thrust J-47 engine, powerplant for the latest Sabre, is the big bottleneck. Assembly facilities are ample, but components are short.

Five engine producers, moreover, are shy anywhere from 50 to 100 machine tools for J-35, J-48, and J-65 jet engines. That's costing about 12% slippage in production. Some of the component manufacturers are even exchanging tools by air; one company makes a certain make of subassemblies, then ships the tooling to another plant working on the same engine.

Design freeze has been a long time coming. Military brass never wants to order a lot of today's plane if there's an improvement just around the corner. Manufacturers have boiled with frustration as they were prevented time and again from opening up assembly lines full speed when the Pentagon rewrote the specs.

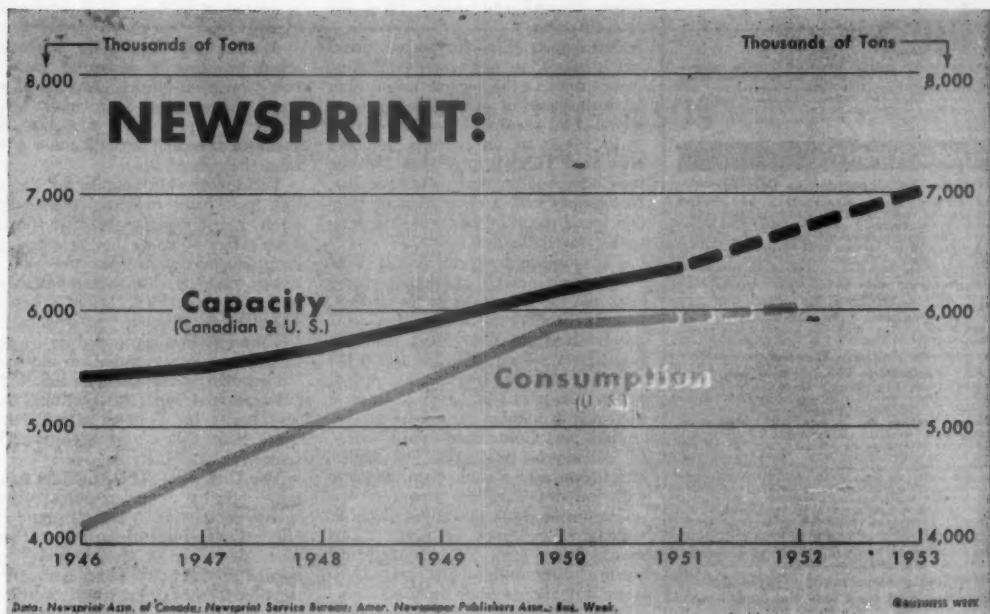
• **Results**—With all these handicaps and annoyances, the industry is now assembling planes four times as fast as two years ago. The past month's deliveries exceeded 800 planes.

According to the current schedule, the industry still has a year and a half in which to boost deliveries by 50%. The airframe producers can speed up easily; they're still working only one shift a day. But engine production, running now about 1,500 units a month, must be nearly doubled by late 1954, and the makers have no easy out. They're already working around the clock. By yearend they'll have a \$15-million backlog of orders.

The pinch in engine manufacture is twofold: machine tools that will handle the high-temperature alloys, and the special alloy steels themselves.

• **Labor**—Despite the industry's continuing expansion, employment won't come close to the World War II peak of 14-million workers. It's now about 590,000, including those in components and engine fields as well as airframe assembly. This employment peak will probably be approximately 750,000 in 1954.

Main labor shortages now are for skilled and professional help, especially aeronautical engineers. Next highest priority is for draftsmen and machinists. About one-third of all shortages in aircraft labor are in professional and semi-professional workers; half are in skilled workers, such as machinists, assemblers, tool and die workers.



Data: Newsprint Assn. of Canada; Newsprint Service Bureau; Amer. Newspaper Publishers Assn.; Bus. Week.

BUSINESS WEEK

## Getting Newsprint Out of the Woods

**Canadian and U.S. producers are finally gaining capacity faster than demand increases.**

There are only two ways to overcome a commodity shortage: increase the supply or cut the demand. The longtime shortage of newsprint—the paper on which newspapers are printed—has a chance of being solved both ways.

The supply is steadily being increased; demand hasn't yet decreased, but at least the rate of increase has slackened (chart).

• **Supply, Demand**—Ever since World War II ended, the Canadian newsprint industry—which supplies four-fifths of U.S. needs—has been adding to capacity at a fast clip. And in the last three years the U.S. industry began to do some expanding too. Combined capacity of Canadian and U.S. mills has risen from 5.5-million tons in 1946 to 6.7-million tons in 1952.

Up to the end of 1950, as the chart shows, consumption climbed even faster, though, than expansion of capacity. During 1951, demand by U.S. buyers leveled off, and the curve has stayed flat during the current year. With capacity scheduled to increase for at least 2½ years more, the U.S. will be taking a smaller share of combined U.S.-Canadian newsprint production.

• **Off the Hook**—Boosting of output and steadyng of demand come just at

an appropriate time to ease the newsprint industry out of a particularly uncomfortable spot.

For the past 20 years, newsprint people have been a favorite target for monopoly investigators in Washington. Starting in the 1930's, they've had to face almost continuous accusations of price-fixing and of restricting production in order to maintain excessive prices.

The enormous growth of demand for newsprint after the war caught the papermakers flatfooted. Before they could move to expand capacity, demand had gone out of sight. In the high spot market prices that resulted, Congress found ample reason to keep the industry on the carpet. A subcommittee of the House Judiciary Committee started hearings in 1950 that are still kept open. And every time the price of newsprint goes up, somebody makes threatening gestures at the producers.

• **No Scare**—Even government investigations have been unable to scare the price down, though. For one thing, newsprint makers worked on low profit margins before the war. Today, too, they can show that they're spending a lot of capital in expansion.

Furthermore, Canadian producers aren't frightened by U.S. monopoly investigations. And they provide 80% of our supply, nearly always take the lead in raising prices.

When the war ended, newsprint was selling for \$51 a ton. The price set by the Canadians last month is \$126 a ton. So far, U.S. producers haven't followed up the Canadians' lead; U.S.-made newsprint is still tagged at \$116 a ton.

Ceiling prices for most U.S. producers are much higher than the \$116 they're still charging. Ceilings are fixed for each company individually, ranging from a low of \$114 to a high of approximately \$210. Eight of the 12 U.S. producers—accounting for 90% of domestic newsprint—could match the Canadian rise without denting their ceilings.

• **Self-Sufficiency**—Despite a lot of talk about making the U.S. self-sufficient in newsprint, there's no chance that our home industry can possibly fill our domestic needs. Even if it expands capacity by 494,000 tons a year—the goal set by the National Production Authority—the U.S. wing of the industry couldn't provide even one-third of the paper that's consumed.

Even so, increased domestic capacity is devoutly wished by the publishing business. Any expansion of production in the U.S. plumps the cushion be-

# clues:

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## EMPLOYMENT

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tween demand and supply, takes the heat off prices.

• **Newspapers** Hit—Newsprint prices weigh heavily in newspaper publishing costs; paper is the biggest single item in the expense of putting out a newspaper. For example, the cost of the paper alone in an average Sunday's New York Times is more than 25¢; the copy sells on the newsstands for 20¢. Newspapers with a circulation of 100,000 spend one-third of their publishing outlay for newsprint.

The climb in newsprint prices, therefore, reflects quickly in the advertising rates and the newsstand prices of newspapers. Since 1945, ad rates have gone up one-third. In 1945, there were 702 newspapers selling at 2¢ to 4¢; today there are only 93. In the same period, newspapers priced at 6¢ or more have increased in number from 7 to 69.

• **Back in Contention**—Until lately, U.S. newsprint production was deliberately cramped. Rather than compete with low-cost Canadian producers, the mills converted old newsprint plants to making other types of paper. This switch dates from 1913, when tariff barriers were torn down and U.S. newsprint lost its price umbrella.

Now the trend is the other way. Costs are equalizing between the two countries. As Canadian mills ate up more pulp and expanded their plants, they had to push farther inland, farther from markets, in order to find pulpwood. Transportation costs went up accordingly; labor, fuel, and other production costs are rising north of the border as well as in the U.S. And U.S. mills can now offer an advantage in freight haulage distance which about makes up for any remaining Canadian advantage in operating costs.

• **Slow on New Plant**—Despite the postwar gains in demand—and price—the newsprint producers both in the U.S. and in Canada have been reluctant to spend big money for entirely new mills. They have boosted capacity instead by speeding up old machines, installing faster-moving new machines.

Only now is Canada finally building a new mill from scratch—the first completely new plant in 15 years. In the U.S., NPA's offer of rapid amortization to papermakers to add 494,000 tons of capacity (BW-Jan. 26 '52, p128) has aroused little enthusiasm. About 119,000 tons of this potential capacity still goes begging, with no takers in sight.

The reluctance of newsprint makers is founded on history. Memories of overcapacity and price wars in the pre-war period still haunt the industry. Even now, quite a few newsprint executives are wondering if the industry won't soon be overbuilt. A dip in demand could once again cut profit margins below the safety limit. The break-even point for Canadian manufacturers

is figured at 80% to 85% of current capacity.

Another big reason for hesitation about investing in newsprint plant is this: Newsprint offers a lower return on capital investment than most other grades of paper. And it requires an awful lot of capital to build a new plant from the ground up.

• **Technology**—Fortunately for the effort to expand capacity, there's still room to modernize existing plants. That's how Canada has achieved all its production gains since the war. A survey taken by the Newsprint Assn. of Canada shows that 71% of a planned 432,000-ton addition to capacity in 1952 and 1953 is accounted for by new machines or improvements in old ones.

Canadian newsprint mills reported a potential of 1.7-million additional tons of capacity by 1960—if it is needed. More than half would be gained by improving machinery.

• **The U. S. Side**—The American newsprint industry figures resources would sustain production at twice the present rate. Techniques of using southern pine, developed a dozen years ago, opened up the South as an economical location for newsprint mills. Southern pine matures in 12 to 15 years, compared with 40 to 50 years for the northern trees.

Pulp is the biggest component of newsprint production costs. The high rate of paper usage has made it tougher than ever to locate timber that's economically suitable.

The search for substitute materials has been going on ever since papermakers discovered they could make paper out of other things besides rags. The most promising substitute so far is bagasse, a sugar cane residue (BW-May 3 '52, p64). Supplies are abundant: about 750,000 tons of this waste product a year in the U.S.

One engineering laboratory figures newsprint could be made from bagasse for about \$65 a ton. But the W. R. Grace mill in Peru, which has been using the stuff for 13 years, says newsprint made from bagasse would have to sell for \$150 a ton in the U.S.

Technically, all of the 243-million tons of fibrous cereal residues left over from harvesting each year could be a candidate for conversion into pulp—if someone can find how to collect it and store it economically.

• **Potential Demand**—The American Newspaper Publishers Assn. estimates that the daily circulation of newspapers—now 54-million—may well hit 65-million by 1960. That would require 7.5-million tons of newsprint—26% more than 1951 consumption. ANPA looks for a continuation of the trend toward bigger papers. It expects a rise in advertising lineage from 2.5-billion lines in 1951 to about 2.9-billion lines in 1960.

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# Not Enough Stockholders

Some 6.5-million Americans own stock in publicly-held corporations.

• More of these shareholders—by a slight margin—are men than are women.

• About 4.9-million of the shareholders have incomes of less than \$10,000 a year. In fact, there are more than one million families with incomes of less than \$4,000 who own shares.

These are some of the principal findings of a survey made by the Brookings Institution (BW—Jul. 5 '52, p36). In themselves they are cheering. For they underline the fact that a sizable number of Americans—many more than in any other nation in history—have a direct stake in industry.

The survey, of course, does not tell the whole story. There are an estimated 3-million people, many of whom also own stock in publicly-held corporations, who have shares in private, closely held companies. And there are other millions who own small businesses. They are the proprietors and partners who own an overwhelming share of the almost 4-million businesses operating in the U. S.

There are others—tens of millions of Americans—who have an indirect share in the ownership of American industry. These are the owners of life insurance policies and bank accounts. They have a real stake in industry's success, although it is one that is seldom brought home to them.

## Facts for Thought

However, there are at least two facets of the Brookings study which will give management pause:

• First is the breakdown of shareholders by their occupations. It tells a dramatic story for management. The story is best told in this condensed table:

	Percent owning stock
Administrative executives .....	44.8%
Professional persons .....	25.6
Operating supervisory officials .....	19.4
Clerical workers .....	7.6
Farmers .....	6.8
Foremen-Skilled workers .....	4.4
Semiskilled workers .....	1.4
Unskilled workers .....	0.2
Housewives .....	6.0

In short, American industry, in spite of the determined efforts of many companies—American Telephone & Telegraph, Sears, Roebuck, Westinghouse, and many others—has so far reached only a small fraction of its production workers with programs to encourage participation in stock ownership. A big share of executives and a rather large group of clerical workers do own stock. But out of about 9.3-million who are classified as foremen and skilled workers, only 410,000 are shareholders. The nation's 35-million housewives, of whom

more than 2.1-million are stockholders, show a far better record any way that you look at it.

• The second disturbing set of figures in the Brookings study comes in its analysis of the extent of employees' ownership of stock in the companies for which they work. Here are the figures:

Industry	Number employed in millions	Percent owning stock in their own companies
Manufacturing .....	16.9	1.4%
Public utilities .....	1.1	15.9
Banking and finance .....	1.7	8.6
Professional business service companies .....	1.2	6.4
Petroleum companies .....	.9	5.8
Transportation companies .....	2.6	3.1
Total .....	24.6	3.2

Clearly the utilities shine. And here the record of the telephone companies is outstanding. In fact, it may be the telephone companies' efforts that account for one odd fact. About 21% of women employees in the utilities own stock as against only 12% of the men.

At the other end of scale is manufacturing. And, on the surface, there's no reason why only one worker in 60 in manufacturing should own stock while one utility worker in six is a shareholder. Certainly, pay isn't the reason. The average production worker in manufacturing is now earning \$66.24 a week. In gas and electric utilities it is higher—\$73.51. But in the telephone companies it is markedly lower—\$59.41.

## The Right Direction

Fortunately—from the viewpoint of industry's desire to broaden its base among stockholders—the trend is apparently upward. There are no studies similar to the Brookings study made earlier which give precise comparisons on the over-all figures. But the Brookings researchers assembled figures on shareholdings in 45 common stocks listed on the New York Stock Exchange. They show that in the twenty years between 1930 and 1950, the total combined number of shareholdings—blocks of shares owned—rose from roughly 2.6-million to 4.5-million, or 72%. In the last five of those years alone, combined shareholdings jumped 14%.

So apparently the American people's participation in ownership of American industry is rising, slowly but steadily.

But the Brookings study clearly shows that companies who want to better relations with their employees, and who want to give workers a direct interest in profits through stock ownership, have a big field ahead of them. The 98.6% of workers in manufacturing who do not own stock make up no small group of potential converts.

# South America's BIGGEST POWER PLANT

... gets the World's  
Greatest Lubrication Knowledge  
and Engineering Service



Brazil's famous Cubatao power generating plant at Serra do Mar, near Sao Paulo, is a prime example of man's engineering genius.

Operated by the Sao Paulo Light and Power Co., Ltd.,\* this hydro-electric development utilizes the waters of rivers in the plateau high above Serra do Mar. Through an ingenious series of dams, canals and pumping stations, these waters are backed up to the edge of this plateau, then channeled down into the huge, mile-long penstocks (shown in illustration), to turn giant water turbines, like the one inset above.

There are eight generating units with a total capacity of 474,000 kw—all protected by famous Gargoyle turbine oils and a program of Socony-Vacuum Correct Lubrication.

Why not give *your* plant, mill or mine this same unsurpassed protection!

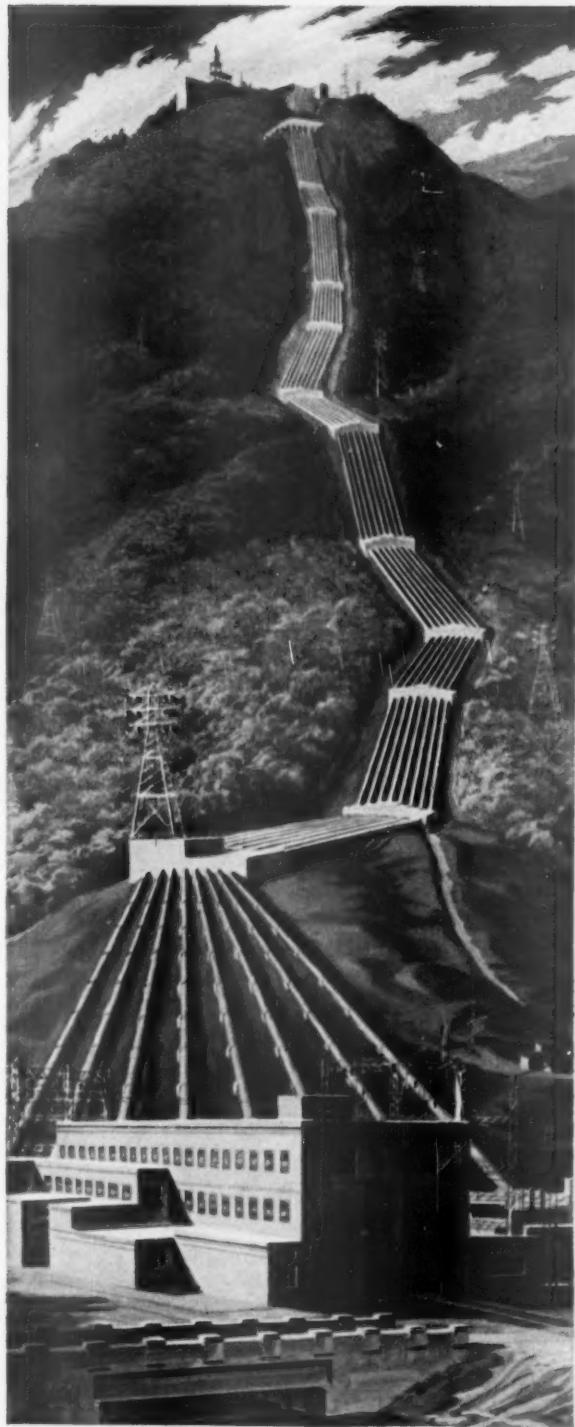
\*One of the operating subsidiaries of the Canadian Corporation, Brazilian Traction, Light & Power Co., Ltd.

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Lubrication*

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## New Senator gets everyone's vote



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**SCENES FROM** early American history inspired The Senator's decorations. Each Drawing Room has its own sofa and arm chairs. And a Radarange in the Coffee Shop car cooks your meals the way you like 'em in a few seconds.

**SWIVEL IN YOUR** reclining Parlor Car chair to face in any direction. Roller bearings on the train's axles help smooth your ride. They made streamliners practical. Now they're ready to revolutionize freight trains, too.

## The railroads' newest vote-getter is "Roller Freight"



**WORKING TO MAKE** freight service ever better, the railroads have waged ceaseless war against the "hot box"—No. 1 cause of delays. Now they're finding the answer in "Roller Freight": freight cars on Timken® roller bearings.

**ONE RAILROAD'S** Timken bearing equipped freight cars have gone 38 million car-miles without a "hot box". By contrast, the plain bearing freight average is only 125,000 car-miles between set-outs for "hot boxes".

"**ROLLER FREIGHT**" can help the railroads get more of tomorrow's freight business. "Rush" shipments will arrive faster. One railroad halved running time with "Roller Freight", upped its livestock business 30%.



**WHEN ALL RAILROADS** go "Roller Freight" they can save \$190,000,000 a year, net a 22% yearly return on their investment. Timken bearings cut terminal inspection man-hours 90%, lubricate up to 89%. Starting resistance is cut 88%, permitting jolt-free starts.

**COMPLETE ASSEMBLIES** of cartridge journal box and Timken bearings for freight cars cost 20% less than applications of six years ago. Applications available for existing cars. Other products of the Timken Company: alloy steel and tubing, removable rock bits.

**NOT JUST A BALL** ◉ **NOT JUST A ROLLER** ◉  
**THE TIMKEN TAPERED ROLLER** ◉ **BEARING**  
**TAKES RADIAL** ◉ **AND THRUST** ◉ **— LOADS**  
**OR ANY COMBINATION** ◉

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Cable address: "TIMROSCO".

*Watch the railroads Go . . . on* **TIMKEN** *Tapered Roller Bearings*

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